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CONTENTS.

VOL. XXXIX.—YEAR 1876.

March, 1876.

PAGE

The Banking Institutions, Bullion Reserves, and Non-Legal-Tender Note Circulation of the United Kingdom Statistically Investigated. By JOHN DUN, General Manager of Parr's Banking Company, Limited .... 1—189

Discussion on Mr. Dun's Paper .... 190—197

Opening Address of the President of the Department IV, "Economy and Trade," of the National Association for the Promotion of Social Science, at the Nineteenth Annual Congress held at Brighton in October, 1875. By M. E. GRANT DUFF, ESQ., M.P. .... 198—210

MISCELLANEA:—

I.—Some Remarks on the Land Laws of England. By G. W. NORMAN, ESQ. .... 211—218

II.—The Climate, Agriculture, Commerce, &c., of Egypt .... 218—223

III.—Lloyd's Statistics of Marine Losses for the Year 1874 .... 223—237

IV.—Fires in the Metropolis during 1875 .... 238—241

V.—English Literature in 1875 .... 241—243

PERIODICAL RETURNS:—

Registrar-General's Report, and Meteorological Table for England and Wales for the December Quarter.—The same for Scotland.—Births, Deaths, and Marriages of the United Kingdom.—Agricultural Statistics of Great Britain and Ireland.—Trade of United Kingdom, 1875-74-73.—Imports and Exports.—Shipping.—Gold and Silver Bullion and Specie.—Revenue Returns.—Average Prices of Corn in England and Wales.—Bank of England Returns.—The London Clearances and Country Bank (Note) Circulation in United Kingdom.—Foreign Exchanges .... 244—270

Additions to the Library during the Quarter .... 271—276

June, 1876.

PAGE

On the Principles which Regulate the Rate of Interest and on the Currency Laws. By ROBERT BAXTER, Esq. .... 277—290

Discussion on Mr. Baxter's Paper .... 291—298

On the Municipal Government of Paris. By SIR CHARLES DILKE, BART., M.P. .... 299—306

Discussion on Sir C. Dilke's Paper .... 307—310

On International Prison Statistics. By FREDERIC J. MOUAT, M.D., F.R.C.S., late Inspector-General of Prisons, Bengal . 311—325

Discussion on Dr. Mouat's Paper .... 326—331

Statistics Relating to the Support of Religious Institutions in England and Wales. By HERBERT S. SKEATS, Esq. .... 332—342

Discussion on Mr. Skeats's Paper .... 343—349

The Supply of Gas to the Metropolis. By HARRY CHUBB, Esq. 350—371

Discussion on Mr. Chubb's Paper .... 372—380

MISCELLANEA :—

I.—General Results of the Commercial and Financial History of 1875 .... 381—391

II.—The Bankers' Clearing House 392

III.—The Domesday Book of 1873 .... 393—410

IV.—The Census of British India of 1871-72 .... 411—416

V.—A Table of Peerages, Steps in the Peerage, and Baronetcies, conferred from 1830-74 417

PERIODICAL RETURNS :—

Registrar-General's Report and Meteorological Table for England and Wales, for the March Quarter.—The same for Scotland.—Births, Deaths, and Marriages of the United Kingdom. — Trade of United Kingdom, 1876-75-74. — Imports and Exports.—Shipping.—Gold and Silver Bullion and Specie.—Revenue Returns.—Average Prices of Corn in England and Wales.—Bank of England Returns.—The London Clearances and Country Bank (Note) Circulation in United Kingdom.—Foreign Exchanges .... 418—437

Additions to the Library during the Quarter .... 438—443

September, 1876.

PAGE

Report of the Council to the Forty-Second Anniversary Meeting of the Statistical Society, held on the 27th June, 1876 .... 445—458

Proceedings of the Forty-Second Anniversary Meeting................ 459—463

On the Valuation of Railways, Telegraphs, Water Companies, Canals, and other Commercial Concerns, with Prospective, Deferred, Increasing, Decreasing, or Terminating Profits. By WILLIAM FARR, ESQ., M.D., D.C.L., F.R.S., &c., &c. .... 464—530

Discussion on Dr. Farr's Paper .... 531—539

On the Validity of the Annual Government Statistics of the Operation of the Contagious Diseases Acts. By the RIGHT HONOURABLE JAMES STANSFELD, M.P. .... 540—561

Discussion on Mr. Stansfeld's Paper .... 562—572

MISCELLANEA:—

I.—Consul-General Playfair's Reports upon Algeria................ 573—577

II.—Lloyd's Statistics of Marine Losses for the Year 1875 .... 577—591

III.—Underwriting in the Year 1805 .... 592, 593

PERIODICAL RETURNS:—

Registrar-General's Report and Meteorological Table for England and Wales, for the June Quarter.—The same for Scotland.—Births, Deaths, and Marriages of the United Kingdom.—Trade of United Kingdom, 1876-75-74 and 1875-71.—Imports and Exports.—Shipping.—Gold and Silver Bullion and Specie.—Revenue Returns.—Average Prices of Corn in England and Wales.—Bank of England Returns.—The London Clearances and Country Bank (Note) Circulation in United Kingdom.—Foreign Exchanges .... 594—614

Additions to the Library during the Quarter .... 615—619

December, 1876.

The Opening Address of JAMES HEYWOOD, ESQ., M.A., F.R.S., PRESIDENT of the Statistical Society, delivered on Tuesday, the 21st November, 1876 .... 621—627

PAGE

Preliminary Report of the Ninth International Statistical Congress, held at Buda-Pesth, from 1st to 7th September, 1876. By FREDERIC J. MOUAT, M.D., F.R.C.S., Foreign Secretary, Statistical Society .... 628—647

Address of the President of the Economic Science and Statistical Section of the British Association for the Advancement of Science, at the Forty-Sixth Meeting, held at Glasgow, September, 1876. By SIR GEORGE CAMPBELL, K.C.S.I., M.P., D.C.L. .... 648—660

Address of the President of the Department of "Economy and Trade," of the National Association for the Promotion of Social Science, at the Twentieth Annual Congress, held at Liverpool, in October, 1876. By G. J. SHAW LEFEVRE, Esq., M.P. .... 661—680

The Physical Requirements of Factory Children. By CHARLES ROBERTS, F.R.C.S., &c., late Assistant Surgeon to the Victoria Hospital for Children, &c.; Assistant to the Commissioners appointed to Report to the Local Government Board on "Changes in Hours and Ages of Employment of "Children and Young Persons in Textile Factories," 1873 . 681—733

MISCELLANEA:—

I.—Hungarian Statistics........ 734—739
II.—Condensed Statistics........ 739—741
III.—The Depreciation of Silver .... 741—744

PERIODICAL RETURNS:—

Registrar-General's Report, and Meteorological Table for England and Wales, for the September Quarter.—The same for Scotland.—Births, Deaths, and Marriages of the United Kingdom.—Trade of United Kingdom, 1876-75-74.—Imports and Exports.—Shipping.—Gold and Silver Bullion and Specie.—Revenue Returns.—Average Prices of Corn in England and Wales.—Bank of England Returns.—The London Clearances and Country Bank (Note) Circulation in United Kingdom.—Foreign Exchanges........ 745—764

Additions to the Library during the Quarter .... 765—770

INDEX to vol. xxxix (1876) .... 771—794

Vol. XXXIX.] [Part I.

JOURNAL OF THE STATISTICAL SOCIETY,

MARCH, 1876.

The Banking Institutions, Bullion Reserves, *and* Non-Legal-Tender Note Circulation *of the* United Kingdom Statistically Investigated. *By* John Dun, *General Manager of Parr's Banking Company, Limited.*

[Read before the Statistical Society, 21st December, 1875.]

CONTENTS:

PAGE

I.—Enumeration and General Review of Joint Stock Banks 9

Number of Joint Stock Banks in United Kingdom 9

Table I. Purely London Banks; Date of Establishment; Paid-up Capital; Reserve Fund; Number of Proprietors; Number and Amount of Shares, Dividends, Price, and Yield 10

„ II. London and Provincial Banks, ditto.. 10

„ III. Purely Provincial, English, ditto 12

„ IV. Scotch, ditto 18

„ V. Irish, ditto 18

„ VI. Number of Joint Stock Banks, classified according to Date of Establishment 20

Remarkable lull in the Establishment of Joint Stock Banks in England from 1840-62; causes thereof 21

Table VII. Number of Banks (Joint Stock and Private) in England and Wales, 1860, 1865, 1870, 1875 22

Progressive Diminution in Number of English Provincial Private Banks; Increase in Number of Joint Stock Banks 22

Table VIII. Number of Banks and Bank Offices in United Kingdom 23

„ IX. Proportion of Banks and Bank Offices to Inhabitants in England and Wales, Scotland, and Ireland 24

Comparison with previous Investigations 24

Table X. Paid-up Capital of Joint Stock Banks 25

Proportion of Paid-up Capital to Population, England and Wales, Scotland and Ireland.. 26

Liability of Shareholders 26

Table XI. Number of Limited and Unlimited Banks 26

Seven old-established Unlimited English Provincial Banks transformed into Limited Banks.. 26

Bank of England, Bank of Ireland, Bank of Scotland, Royal Bank of Scotland, and British Linen Company, Limited, Banks...................... 27

Obvious advantage of Limited Liability.. 27

PAGE
Necessity for Substantial Margin of Uncalled Capital 27
Table XII. Calls made in Liquidation of Failed Banks 28
„ XIII. English Limited Banks; Proportion of Uncalled to Paid-up Capital 29
Advantage of an Uncalled Margin on Shares of Unlimited Banks............ 30
Table XIV. English Unlimited Banks; Proportion of Uncalled to Paid-up Capital 30
„ XV. RESERVE FUNDS of Joint Stock Banks of United Kingdom 32
„ XVI. Paid-up Capital and Reserve Funds of Joint Stock Banks of United Kingdom........................ 33
Purposes and Formation of Reserve Fund........................ 33
Twelve English Provincial Banks of which Reserve Fund exceeds or nearly equals Paid-up Capital........................ 34
Reserve Fund equal to one-half of Paid-up Capital quite ample 34
Table XVII. NUMBER of PROPRIETORS and Proportion to Population; England and Wales, Scotland, Ireland 34
„ XVIII. DIVIDEND and BONUSES; England, Scotland, Ireland 35
„ XIX. PREMIUM per cent. ON PAID-UP CAPITAL; England, Scotland, and Ireland 36
„ XX. YIELD per cent. to Purchaser 36
CIRCULATION of Notes 37

II.—PUBLISHED BALANCE SHEETS OF JOINT STOCK BANKS........................ 38
Tables of Balance Sheets and Analyses thereof 38
Tables XXI, XXII, and XXIII. Purely London Banks........................ 38
„ XXIV, XXV, and XXVI. London and Provincial Banks 41
„ XXVII, XXVIII, and XXIX. Purely Provincial English Banks 44
„ XXX and XXXI. Scotch Banks 54
„ XXXII, XXXIII, and XXXIV. Irish Banks........................ 58
PUBLICATION OF BALANCE SHEETS; Advantages thereof........................ 60
Items of Liabilities and Assets 60
All Joint Stock Banks should be required by law to publish Balance Sheets in a prescribed Form 61
Table XXXV. *Pro formâ* General Balance Sheet and Statement of Profit and Loss 63

III.—ANALYSIS OF LIABILITIES 64
Ratio per cent. of Uncalled Capital to Liabilites to Public 64
PROPRIETORS' FUNDS, *i.e.*, Paid-up Capital, Reserve Fund, Balance of Undivided Profit........................ 64
Ratio of Proprietors' Funds to Liabilities to Public 65
Table XXXVI. Ratio of Proprietors' Funds to Liabilities to Public; London and Provincial and Purely Provincial English Banks; Small Banks; Medium-sized Banks; Large Banks 66
„ XXXVII. Ratio of Proprietors' Funds to Liabilities to Public; 44 Purely Provincial English Banks: without branches; with 1, 2, or 3 Branches; with 4 to 10 branches; with more than ten branches 67

PAGE

Table XXXVIII. Ratio of Proprietors' Funds to Liabilities to Public, London and Provincial Banks and Purely Provincial English Banks by Districts 69

Ratio of Proprietors' Funds to Liabilities to Public, Limited and Unlimited Banks 69

Circumstances which should determine the Proper Ratio, viz., Nature of Business, Character of Money lodged and of Advances, Local Position 69

Lowest and Highest Ratios shown by Banks in various Territorial Divisions 70

Mr. Gilbart's Opinion that Capital should never be less than one-third of Liabilities 70

The Fair Proportion of Proprietors' Funds to Banking Liabilities would seem to be 15 to 20 per cent. 71

Proprietors' Funds of London Banks too small 71

Advantage of large Paid-up Capital in keeping down Rate of Dividend 71

MONEY LODGED; Amount held by Joint Stock Banks 72

Table XXXIX. Number of Depositors and Amount of Deposits in National Provincial Bank of England and in Scotch Banks classified according to Amount at credit of each Depositor 73

Proving Money lodged in English Banks to be held in similar Amounts and from same Classes as in Scotch Banks 73

PROGRESS OF MONEY LODGED 73

Table XL. Progress of London Joint Stock Banks, 1844-74 74

Progress of Money Lodged, Scotch Banks, 1845-75 74

" " " Irish Banks, 1840-74 75

Table XLI. Progress of Savings Banks Deposits, England, Scotland, and Ireland; Total, 1844-74 75

" XLII. Progress of Money lodged in certain English Banks, 1870-74 76

" XLIII. Progress of Money lodged in Scotch and Irish Banks, 1870-74 77

Increase in English Provinces greater than in Scotland and Ireland 77

ACCEPTANCES; Amount; Classification according to their Nature 77

General Remarks 78

Acceptances of London Banks; large 78

Amount in Case of City Bank; doubtful if it be profitable 78

Increase of Acceptances of Scotch Banks established in London 79

ESTIMATED DISTRIBUTION OF LIABILITIES 79

Table XLIV. Percentage of Items of Liabilities to Totals; Purely London, London and Provincial, Purely Provincial, English, Scotch, Irish 80

IV.—ANALYSIS OF ASSSETS.

Items of Assets 80

CASH AND SURPLUS FUNDS 80

Five Lines of Defence:—1. Cash in hand. 2. Cash at Call. 3. Readily available Investments. 4. Notice-Money. 5. Bill Case 80

Practice of Rediscounting Customers' Bills; Objection thereto 82

Three Classes of English Country Banks:—1. Deposit Banks without a Banking Outlet for their Resources. 2. Deposit Banks with sufficient Banking Outlet for Resources. 3. Banks with a good Banking Outlet but insufficient Deposits, requiring therefore to Rediscount 83

PAGE
Scope for Amalgamation of Banks 83
Difficulty of correct Analysis of Cash and Surplus Funds 83
Average RATIOS OF CASH AND SURPLUS FUNDS TO LIABILITIES TO PUBLIC; English, Scotch, and Irish Banks 84
Highest and Lowest Ratios 84
Fair Proportion of Cash and Surplus Funds 25 to 30 per cent. of Liabilities to Public 85
MONEY LENT:—
Proportion of Bills to Loans to Customers or Overdrafts depends on local circumstances 85
Bills preferable to Advances on Loan or Current Account 85
Tendency of Loans or Overdrafts to Increase during Time of Pressure 85
Practice of Country Banks as to Overdrafts 86
Practice of London Banks as to Loans to Customers 86
Few Banks distinguish between Bills and Advances in their Balance Sheets 86
Thirteen Purely Provincial English Banks which do; Calculation therefrom of proportion of Bills to Advances on Current Accounts 87
Verification of Calculation by Rebate of Discount 87
Practice of Banks as to Rebate 87
Estimated Proportion of Bills to Advances on Current Accounts; Scotland, Ireland 88
Calculation of Proportion of Bills to Advances, London and London and Provincial Banks, by means of Rebate 89
General Result of Calculations 90
PROPERTY ACCOUNT 90
ESTIMATED DISTRIBUTION OF ITEMS OF ASSETS 90
Calculation of Distribution of Items of Assets of Scotch and Irish Banks from data in Tables 90
Table XLV. Estimated Percentage of Items of Assets to Total: London, London and Provincial, Purely Provincial, English, Scotch, Irish 92
„ XLVI. English Provincial Joint Stock Bank Balance Sheets, 1870 92
„ XLVII. Scottish Bank Balance Sheets, 1866 and 1870 96
„ XLVIII. „ Dividend, Price, Yield, 1866 and 1870.... 98

V.—WORKING EXPENSES, PROFITS, PRICE AND YIELD TO INVESTOR:—
CHARGES OR WORKING EXPENSES 99
General Remarks 99
Table XLIX. Ratios per cent. of Charges to—1, Net Profits, less Charges; 2, Liabilities to Public; 3, Total Resources 100
PROFITS:—
"Economist's" mode of Calculation of Net Business Profit earned on Cash Deposits; fallacy thereof 100
Employment by Mr. Gairdner of "Economist's" mode of calculation to estimate gain of 1,125,000*l.* per annum to People of Provincial England by adoption of Scotch Margin of Banking Profit; Utter Fallacy of this Estimate 101
RATIO OF NET PROFITS TO TOTAL RESOURCES. Purely London, and London and Provincial, Purely Provincial, English, Scotch and Irish Banks 102

PAGE
Highest and Lowest Rates of Profit on Total Resources 103
Circumstances which modify Rate of Profit 103
Table L. Rate of Profit, London and Provincial and Purely Provincial English Banks, by Districts 104
Illustrative Remarks 105
Table LI. Rate of Profit, Scotch and Irish Banks 107
Illustrative Remarks 107
Table LII. Rate of Profit, with Features tending to modify the same, England, Scotland, Ireland 108
Illustrative Remarks 108
MARKET PRICE AND YIELD TO INVESTORS 109
Considerations which regulate Market Price 109
Table LIII. Profit, Dividend, Price and Yield of London and Provincial, and Purely Provincial English Joint Stock Banks 109

VI.—ATTEMPTED ESTIMATE OF TOTAL BANKING LIABILITIES AND ASSETS OF UNITED KINGDOM 111
Data already Ascertained 111
Calculation of Liabilities to Public of 47 English Purely Provincial Joint Stock Banks from Paid-up Capital; from Average Liability per Office ascertained for 49 Banks; from Average Liability per Bank ascertained for 49 Banks 111
Table LIV. United Kingdom Joint Stock and Private Banks; Returns of Capital and Deposits, supplied to Committee on Banks of Issue, 1875 112
Confirmation of above Calculations from this Table 113
Calculation of probable Liabilities to Public of Private Country Bankers from Liabilities per Office of Country Joint Stock Banks 113
Attempted Verification from amount of Private Banks' Note Circulation 114
Further Verification from Returns to Committee 114
Estimate of Liabilities of London Private Bankers 115
Capital and Liabilities of London Discount Houses 116
Capital and Liabilities of Bank of England 116
TOTAL BILLS UNDER DISCOUNT 116
Independent Confirmation of Mr. Palgrave's Estimate of Total Bills Current in United Kingdom 117
Estimated Amount of Funds on London Market for Discount of Bills 117
Estimated Average Amount of Bills Discounted Daily in London Market 117
Comparison of Estimate of Total Bills Discounted in London and Locally with Mr. Newmarch's Estimate for 1850 117
Table LV. Estimated Total Liabilities and Assets of all the Banks of the United Kingdom in the form of Debtor and Creditor Balance Sheet 118
TOTAL BANKING LIABILITIES 120
Stupendous Amount 120
Table LVI. Comparison of Present Estimate of Capital and Liabilities of Banks of United Kingdom with Previous Estimates of Mr. Newmarch, 1850; Mr. Palgrave, 1871; Mr. Moxon, 1873 121
GREAT ALTERATION IN RELATIVE WEIGHT OF BANK OF ENGLAND IN MONEY MARKET SINCE 1844 121

PAGE
Estimated Discounts and Banking Loans of Bank of England compared with those of other Banks and Discount Houses 122
Secondary Position of Bank of England as a Lending Bank in Ordinary Times 122
Consequent Loss by Bank of England of Control over Market Discount Rate and Weakening of Action of Bank Rate on Foreign Exchanges.... 123
Estimate of TOTAL MONEY LODGED with Banks BY THE PUBLIC 123
Table LVII. Estimate of BANKING LIABILITIES RESTING ultimately ON BANK OF ENGLAND RESERVE, and Comparison with Mr. Palgrave's Estimate for 1871 124
Dangerous Inadequacy of Sole Ultimate Bullion Reserve compared with Banking Liabilities........................ 125
CONSTITUTION of our MONETARY SYSTEM........................ 125
PANICS; Suspension of Bank Act 125
Management of Bank of England 126
AUGMENTATION OF BULLION RESERVE absolutely necessary 127
Bank has to serve Two Masters........................ 128
Effect on Bank of England Reserve of London Banks holding their own Bullion Reserve 129
Necessity of prompt United Action by London Banks to secure adequate Bullion Reserve 130
One Reserve System no longer Possible or Safe........................ 130
Plurality of Reserves Essential 130
Suggested Monthly Return by each Bank of Average Stock of Legal Reserve 131
Proposal to reunite Issue and Banking Departments; Objection thereto 131
Proposal to legalise Suspensory Power; Objections thereto 132
Only practicable Legislative Solution of Difficulty, the Transference of Issue Department to State 133
Largest possible Bullion Reserves unavailing if Credit Overstretched 134
Mr. Bagehot's Objection to State Department of Issue 134
Discreditable that Question should continue to be shirked........................ 135
Pending Inquiry and Legislation London Banks should hold their own Bullion Reserves, with means of rapidly increasing them.................. 135
Table LVIII. Purely Provincial English Joint Stock Banks; Balance Sheets of Forty-four Banks, 1873 136
„ LIX. London and Provincial Joint Stock Banks; Balance Sheets for Year 1873 138
„ LX. Analysis of Balance Sheets of Forty-four Purely Provincial English Joint Stock Banks, 1873........................ 140
„ LXI. London and Provincial Joint Stock Banks; Analysis of Balance Sheets, 1873 142
„ LXII. Dividends and Prices of Forty-four Purely Provincial English Joint Stock Banks, 1873 144
„ LXIII. London and Provincial Joint Stock Banks; Dividends and Prices, 1873........................ 145

VII.—NON-LEGAL-TENDER NOTE CIRCULATION.
Introduction 145
STATUTORY CONDITIONS of Non-Legal-Tender NOTE ISSUES in ENGLAND, and their Operation 146

PAGE
Table LXIV. England and Wales, Issues Authorised, 1844, since Lapsed and now Remaining 147
„ LXV. Lapsed Issues classified according to cause of Forfeiture 148
Joint Stock Issues show greater permanency than those of Private Banks 149
Amount of Authorised Issues Lapsed Quinquennially since 1844 149
Stability of English Country Issues 149
STATUTORY CONDITIONS of NOTE ISSUES in SCOTLAND 149
Their operation 150
STATUTORY CONDITIONS of NOTE ISSUES IN IRELAND 151
Their operation 151
ADVANTAGES OF SCOTCH AND IRISH BANKS OF ISSUE OVER ENGLISH COUNTRY BANKS OF ISSUE. No small Notes in England. No excess of Issue possible in England 151
Table LXVI. Scotch and Irish Banks; Average Excess of Issue and Coin held 153
English Banks Return—Monthly Average of Daily Circulation. Scotch and Irish Banks—Monthly Average of Weekly Circulation 153
In England Restrictions on Amalgamation of Issues; in Scotland and Ireland none 154
In Scotland, Monopoly of Banking as well as Issue 154
DISTRIBUTION and ACTUAL POSITION of NON-LEGAL-TENDER NOTE CIRCULATION in UNITED KINGDOM 155
Table LXVII. Distribution 155
„ LXVIII. Actual Circulation per Bank, England, Scotland, and Ireland 156
„ LXIX. English Joint Stock Banks of Issue, classified according to Amount of actual Average Circulation 157
„ LXX. English Private Banks of Issue similarly classified 159
„ LXXI. Results of Tables LXIX and LXX 162
„ LXXII. English Joint Stock Banks of Issue; Relations of Authorised Issues and Actual Circulation to Paid-Up Capital 163
„ LXXIII. Scotch Banks; the same 165
„ LXXIV. Irish Banks of Issue; the same 165
„ LXXV. English Joint Stock Banks of Issue classified according to Amount of Paid-Up Capital 166

POSSIBLE LEGISLATION :—

Abolition of all Non-Legal-Tender Issues 166
Erroneous Views of Sir Robert Peel 167
Table LXXVI. Bankruptcies of Private Bankers in the years 1839-43.... 167
Change in Relative Employment of Notes since 1844 168
Overissue and Depreciation impossible if Convertibility maintained Legal-Tender Note Issue a Function of the State; not so Non-Legal-Tender Note Issue 169
Sole advantage of confining Issue to State or a State Bank, undoubted security for every Note 170
Estimate of Profit to State from Suppression of English Provincial Issues; but Issuers must be compensated 170
Value of Issues: Direct Value; Indirect Value. Mr. Seebohm's testimony on the latter point 171

PAGE
Adequate compensation to Issuers must entail considerable loss to State.... 171
Postponed compulsory Forfeiture of Issues without Compensation would be Confiscation 172
Stability and Acceptability of Country Issues; Note Holders entitled to protection against Loss 172
Special Merits of English Country Circulation :—
1. Ready Convertibility; Bank of England Notes not readily Convertible........ 172
2. Freedom from Forgery; Testimony of Mr. Seebohm 173
3. Cheapens Banking to the Public; no Compensation to Issuers could ever compensate Public; Testimony of Mr. Bagehot 173
4. Promotes Extension of Banking; Mr. Seebohm's Evidence 174
5. Periodic Expansions do not affect Bank of England Reserve 174
Scotch Circulation, estimated Value thereof 175
Irish Circulation, „ 175
Profit and Loss to State from suppression of all Non-Legal-Tender Issues 176
RETENTION AND PROPOSED REFORM OF NON-LEGAL-TENDER ISSUES; their Solitary Defect no Security but Solvency of Issuer 176
Remedies Proposed: 1. To make Notes a First Charge on Estate of Issuer; 2. To Require Deposit with State of English Government Securities to cover Authorised Issue; Insufficiency of such Security in certain circumstances; Cost to Issuer 177
3. To make Notes a first charge on Issuer's Estate, and to require Government Security for part of Authorised Issue 179
PROPOSED EXTENSION OF NON-LEGAL-TENDER ISSUES 180
Cost to Issuer........ 180
Monthly Return of Legal Tender held 180
All Provisions against Amalgamations should be abolished 180
Mode of avoiding Multiplicity of Issuers 181
Extension of Country Issues on Security would facilitate Formation of Larger Legal Tender Reserves 181
Estimated amount of Gold and Bank of England Notes in hands of Public; comparison with Legal Tender in Reserve; more should be in Reserve, less in Circulation 182
Scheme Proposed would relieve Bank of England Reserve of Strain of Periodic Expansions of Scotch and Irish Issues........ 184
Would remove Inequalities of Privilege between Bank and Bank 184
Cases of City of Glasgow Bank and British Linen Company compared 184
Monopoly of Issue and Banking in Scotland would be abolished 185
INTRUSION OF SCOTCH BANKS INTO ENGLAND; why should Public be deprived of Advantage of Competition of Scotch Banks on English soil? 186
1. Justice to English Banks 186
Diverse dealings of Legislation with Scotch and English Banking; Scotch Monopoly the most remarkable instance of Protection extant 186
2. Justice to Scotland forbids Ramification of Scotch Banks beyond Scotland 187
Table LXXVII. Progress of Scotch Banking, 1845 to 1875........ 188
Scotch Banks forfeit their Scotch Privileges when they cease to be purely Scotch Banks 188

PAGE
Sound and Intelligible Principle of Mr. Goschen's Bill.......... 188
Case of National Bank of Scotland and Bank of Scotland several years in London 188
Under one State Issue, Banking in each division of United Kingdom would be free to Banks of any other 189
If Non-Legal-Tender Note Issues Secured and Extended, Objections to Scotch Competition on English soil would be in a great degree removed 189

I.—ENUMERATION AND GENERAL REVIEW OF JOINT STOCK BANKS.

THE "Banking Almanac" for 1875, published in December, 1874, gives the joint stock banks in England and Wales as 121.

Omitting the Bank of England, two Isle of Man banks, the Cheque Bank (Limited), and the Shropshire Banking Company, since absorbed by Lloyd's Banking Company (Limited), the City and County Bank (suspended), and adding the Ludlow and Tenbury Bank, which, though a bank of issue, does not appear in the "Almanac," the total number stands at 116.

These are—

	Number.
Purely London	12
London and Provincial	7
Purely Provincial	97
Total England and Wales	116
Add—	
Isle of Man	2
Scotland	12
Ireland	9
Total joint stock banks, United Kingdom	139

The following tables, compiled from the "Investors' Monthly "Manual" for August, 1875, the "Banking Almanac" of 1875, and the balance sheets or statements of the banks where these were available, show the date of establishment, number of offices, number of shareholders, paid-up capital, reserve-fund, shares, dividend, market price, and yield to the investor:—

Table I of the Purely London Banks.
,, II of the London and Provincial Banks.
,, III of the Purely Provincial Banks, roughly classified in districts.
,, IV of the Scotch Banks.
,, V of the Irish Banks.

TABLE I.—*Purely London*

Number.	Names.	1 Date of Establishment.	2 Number of Offices.	3 Paid-up Capital.	4 Reserve and Balance after last Dividend.
		Year.	No.	£	£
1	LONDON AND WESTMINSTER BANK	1834	8	2,000,000	667,501
2	LONDON JOINT STOCK BANK	'36	6	1,200,000	522,713
3	UNION BANK OF LONDON	'39	5	1,395,000	411,123
4	CITY BANK *	'55	6	600,000	137,554
5	IMPERIAL BANK, *Limited*	'62	3	675,000	97,132
6	ALLIANCE BANK, *Limited*	'62 '71	1	800,000	170,000
7	CENTRAL BANK OF LONDON, *Limited*	'63	5	100,000	25,260
8	METROPOLITAN BANK, *Limited*	'67	1	190,583	2,500
9	St. James' Bank, *Limited*	'71	1	6,620	100
10	W. LONDON COMML. BANK, *Limited*	'66	2	22,269	981
11	London Banking Association, *Limited* †	'72	1	—	—
12	MERCHANT BANKG. CO. OF LONDON, *Limd.*	'63	1	375,000	103,980
	Totals	—	40	7,364,472	2,138,844
				11 banks,	11 banks,
	Averages	—	3⅓	669,497	194,440

* 90,160*l.* of capital consisting of deferred shares received no dividend.

† The business of this Association is not that of ordinary London bankers, and their Exchange.

TABLE II.—*London and Provincial*

Number.	Name.	1 Estab- Date of lishment.	2 Number of Offices.	3 Paid-up Capital.	4 Reserve and Balance after last Dividend.
		Year.	No.	£	£
1	NATIONAL PROVINCIAL BANK OF ENGLAND ,, ,, ,, ,, New, 1874	1833	138	1,462,500	742,444
2	LONDON AND COUNTY BANK	'36	149	1,425,000	719,657
3	LONDON AND SOUTH-WESTERN BANK, *Limited*	'62	27	166,180	14,012
4	CONSOLIDATED BANK, *Limited*	'63	4	800,000	125,876
5	MIDLAND BANKING COMPANY, *Limited*	'63	28	300,000	45,000
6	LONDON AND PROVINCIAL BANK, *Limited*	'64	55	150,000	34,818
7	LONDON AND YORKSHIRE BANK, *Limited*	'72	11	121,284	2,331
	Totals	—	412	4,424,964	1,684,138
	Averages	—	59	632,138	240,591

Joint Stock Banks, 1875.

5 Number of Proprietors.	6 Number of Shares.	7 Amount per Share.	8 Paid per Share.	9 Dividend and Bonus per Cent. for 12 Months.	10 Price per Share, August, 1875.	11 Premium per Cent.	12 Yield per Cent. at Price.			Number
No.	No.	£	£	Per cnt.	£	Per cnt.	£	s.	d.	
4,800	100,000	100	20	16	64½	222½	4	19	3	1
2,560	80,000	50	15	18½	47	213⅓	5	17	11	2
2,800	90,000	50	15½	15	44	183⅞	5	5	9	3
830	60,000	20	10	9	13	30	6	18	6	4
530	45,000	50	15	8	17½	16⅔	6	17	2	5
1,240	80,000	25	10	7	12½	25	5	12	–	6
350	20,000	10	5	8	8	60	5	–	–	7
500	18,031	10	10	8*	9⅞	Discount		—		8
	6,849	10	1½							
28	—	20	10	5½	—	—		—		9
109	4,005	10	3 to 6	5	—	—		—		10
—	—	—	—	—	—	—		—		11
260	15,000	100	25	10	36	44	6	18	11	12
14,007	—	—	—	—	—	—		—		
				11 banks,			8 banks,			
1,167	—	—	—	11	—	—	5	18	8	

shares were privately subscribed for and no quotation applied for on the Stock

Joint Stock Banks, 1875.

5 Number of Proprietors.	6 Number of Shares.	7 Amount per Share.	8 Paid per Share.	9 Dividend and Bonus per Cent. for 12 Months.	10 Price per Share, August, 1875.	11 Premium per Cent.	12 Yield per Cent. at Price.			Number.
No.	No.	£	£	Per cnt.	£	Per cnt.	£	s.	d.	
3,312	20,000	50	21	23	85	304⅘	5	13	7½	1
	77,500	20	12	23	49	308⅓		—		
	28,125	20	4	23	36	—		—		
3,250	60,000	50	20	18	62	210	5	16	2	2
580	8,309	100	20	8	24	20	6	13	4	3
1,650	200,000	10	4	10	7½	87½	5	6	9	4
887	15,000	100	20	9	27⅝	38⅛	6	10	4	5
625	30,000	10	5	10	9½	90	5	5	3	6
539	13,476	50	9	4	5½	Discount	6	10	11	7
10,843	—	—	—	—	—	—		—		
1,549	—	—	—	$11\frac{5}{7}$	—	—	5	19	5¾	

TABLE III.—*Purely Provincial English*

Number.	Name. [*Italics*—Small or Large—denote Banks of Issue, CAPITALS—Italic or Plain—Banks which publish Balance Sheets.]	1 When Estab-lished.	2 Number of Offices.	3 Paid-up Capital.
	I. Cumberland, Northumberland, and Westmoreland.	Year.	No.	£
1	*CARLISLE CITY AND DISTRICT BANK*........	1837	6	80,162
2	*CARLISLE AND CUMBERLAND BKG. CO.*	'36	6	75,000
3	*CUMBERLAND UNION BANK, Limited*	'29	18	225,000
4	*BANK OF WHITEHAVEN, Limited*	'37	4	98,530
5	*Whitehaven Joint Stock Bank*	'29	6	45,000
6	*Bank of Westmoreland*	'33	2	25,680
7	NORTH EASTERN BANKING COMPANY, *Limited*	'72	17	260,000*
8	INDUSTRIAL BANK, *Limited*, NEWCASTLE	'72	1	20,323
9	NORTHN. COUNTIES' BANKING CO., *Limd.*, NEWCASTLE	'71	2	21,690
	II. Liverpool.			
10	Bank of Liverpool	1831	1	625,000
11	LIVERPOOL UNION BANK	'35	1	600,000
12	,, COMMERCIAL BANK, *Limited*	'32	1	350,000
13	NORTH WESTERN BANK, *Limited*, LIVERPOOL	'64	1	405,000
14	NATIONAL BANK OF LIVERPOOL, *Limited*	'63	3	450,000
15	ADELPHI BANK, *Limited*	'61	2	130,110
16	*NORTH AND SOUTH WALES BANK*....................	1836	37	420,000
	III. Manchester District.			
17	MANCHESTER AND LIVERPOOL DISTRICT BANK	1829	52	905,000
18	,, COUNTY BANK, *Limited*....................	'62	27	660,000
19	,, Salford Bank..	'36	9	600,000
20	UNION BANK OF MANCHESTER, *Limited*...........................	'36	21	440,000
21	MANCHESTER JOINT STOCK BANK, *Limited*	'73	2	90,000
22	LANCASHIRE AND YORKSHIRE BANK, *Limited*	'72	9	250,000
23	*Lancaster Banking Company*	'26	14	275,000
24	PRESTON BANKING COMPANY	'44	7	191,484
	,, New A Shares....................	—		50,000
25	PARR'S BANKING COMPANY, *Limited*, WARRINGTON	1865	17	290,000
26	Bank of Bolton	'36	3	225,000
27	Bury Banking Company	'36	1	109,080
28	ROCHDALE JOINT STOCK BANK, *Limited*	'72	1	22,656
29	Ashton, Stalybridge, &c., Bank	'36	1	50,000
	IV. Yorkshire.			
30	*Darlington District Bank*	1831	8	68,000
31	*SWALEDALE, &c., BANKING COMPANY*...........	'36	4	63,000
32	*Knaresborough and Claro Banking Company*	'31	6	unknown
33	*YORKSHIRE BANKING COMPANY*	'43	22	250,000
34	*York City and County Bank*	'30	15	125,000

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* Viz., 40,000 ordinary shares—6*l*. paid and 1,000 20*l*. shares deferred; no dividend as yet on the latter.

Joint Stock Banks, 1875.

4 Reserve and Balance after Last Dividend.	5 Number of Proprietors.	6 Number of Shares.	7 Amount per Share.	8 Paid-up per Share.	9 Dividend per Cent. per Annum for 12 Months, including Bonus.	10 Price per Share, August, 1875.	11 Premium per Cent.	12 Yield per Cent. at Price.			Number.
£	No.	No.	£	£	Per cnt.	£	Per cnt.	£	s.	d.	
93,025	413	6,413	25	12½	20	44¼	254	5	13	–	1
103,836	325	15,000	20	5	21	22½	350	4	13	4	2
85,724	780	18,000	30	12½	18	44	252	5	2	3	3
96,797	304	9,853	30	10	20	37¼	272½	5	7	4	4
28,195	209	3,000	100	15	25	64	326⅔	5	17	2	5
15,000	106	2,140	100	12	10	19	58⅓	6	6	4	6
80,412	1,028	40,000	20	6	3¾	5¾	Dis.	3	18	3	7
1,500	211	6,873	5	3	10	3¼	8⅓	9	4	8	8
1,777	36	723	50	30	7¾	34	13⅓	6	16	9	9
317,778	527	50,000	100	12½	16	25⅛	101	7	19	2	10
164,365	156	30,000	20	20	10	29	45	6	18	–	11
205,729	280	35,000	20	10	12½	18	80	6	18	10½	12
101,179	367	54,000	20	7½	7	10	33⅓	5	5	–	13
106,400	752	30,000	25	15	6⅝	17⅜	15⅚	5	18	–	14
7,194	357	13,011	20	10	5	10	Par	5	–	–	15
235,328	852	42,000	10	10	18¾	32¾	227½	5	14	6	16
571,774	1,250	90,500	20	10	20	36½	265	5	9	7	17
354,885	730	44,000	100	15	15	40½	170	5	11	1	18
250,000	230	75,000	20	8	11⅙	14	75	6	7	7	19
150,097	384	40,000	25	11	12	23½	$113\frac{7}{11}$	5	12	4	20
31,630	263	15,000	20	6	10	12¼	104⅙	4	17	11	21
34,145	450	25,000	20	10	6	13⅞	38¾	4	6	5¾	22
276,216	324	11,000	25	25	30	155	520	4	16	9¼	23
49,900	110	2,000	100	100	Nil	23	—		Nil		24
		2,000	25	25	10	33	32	7	11	6½	
85,768	265	14,500	100	20	15	60	200	5	–	–	25
—	247	15,000	20	15	6	21½	43⅓	4	3	9	26
120,000	151	18,180	10	6	23	24	300	5	15	–	27
4,446	148	5,664	20	4	7¼	5	25	5	16	–	28
16,005	148	12,500	10	4	10⅝	8	100	5	6	3	29
29,416	78	4,000	100	17	10†	23	35⅓	7	7	10	30
33,000	121	8,400	100	7½	20	‡	—		—		31
24,000	104	—	—	20	15	—	—		—		32
163,000	425	20,000	25	12½	24	57	356	5	5	3	33
100,000	167	5,000	100	25	18	70	180	6	8	7	34

† And also 1*l*. per share added to capital. ‡ Shares very rarely dealt in.

TABLE III.—*Purely Provincial English*

Number	Name. [*Italics*—Small or Large—denote Banks of Issue, CAPITALS—Italic or Plain—Banks which publish Balance Sheets.]	1 When Established.	2 Number of Offices.	3 Paid-up Capital.
	IV. Yorkshire—*Contd.*	Year.	No.	£
35	*York Union Banking Company*	1833	10	132,000
36	*Hull Banking Company*	'33	4	90,990
37	BANK OF LEEDS, *Limited*	'64	1	151,300
38	LEEDS AND COUNTY BANK, *Limited*	'62	6	230,000
39	EXCHANGE AND DISCOUNT BANK, *Limited*, LEEDS	'66	2	89,250
40	*BRADFORD COMMERCIAL BANKING CO.*	'33	1	193,500
41	,, *BANKING COMPANY*	'27	1	408,000
42	BRADFORD DISTRICT BANK, *Limited*	'62	2	227,500
43	,, OLD BANK, *Limited*	'64	3	423,160
44	*Halifax Joint Stock Bank*	'29	3	150,000
45	*HALIFAX COMML. BANKING CO., Limited*	'36	2	120,000
46	*Halifax and Huddersfield Union Bank*	'36	2	250,000
47	*Huddersfield Banking Company*	'27	4	382,500
48	*West Riding Union Bank*	'32	3	200,000
49	*Wakefield and Barnsley Union Bank*	'32	3	100,000
50	*Barnsley Banking Company*	'32	2	40,575
51	SHEFFIELD UNION BANKING COMPANY	'43	6	180,000
52	*SHEFFIELD AND ROTHERHAM BKG. CO.*	'36	5	160,704
53	*SHEFFIELD BANKING COMPANY*	'31	4	293,160
54	,, *AND HALLAMSHIRE BANK*	'36	1	183,200
	V. Midland Counties—Agricultural.			
55	*Chesterfield and North Derby Bank*	1834	1	35,000
56	*Derby and Derbyshire Bank*	'33	3	62,500
57	DERBY COMMERCIAL BANK, *Limited*	'68	1	30,000
58	*BURTON, UTTOXETER, &c., BANK*	'39	3	130,000
59	*Nottingham and Notts Banking Company*	'34	8	203,500
60	*Moore and Robinson's Notts Banking Company, Limited*	'36	2	203,000
61	NOTTINGHAM JOINT STOCK BANK, *Limited*	'65	6	95,500
62	*Lincoln and Lindsey Banking Company*	'33	12	87,500
63	*STAMFORD, SPALDING, &c., BANKING CO.*	'32	19	200,000
64	*Pares's Leicestershire Banking Company*	'36	6	310,000
65	*LEICESTERSHIRE BANKING COMPANY*	'29	11	275,000
66	*Coventry Union Banking Company*	'36	2	56,000
67	,, *and Warwickshire Bank*	'35	1	78,080
68	*Leamington Priors and Warwickshire Bank*	'35	4	32,000
69	*Northamptonshire Banking Company*	'36	4	78,000
70	,, *Union Bank*	'36	4	132,500
	VI. Black Country.			
71	LLOYD'S BANKING COMPANY, *Limited*	1865	32	400,000
72	BIRMINGHAM, DUDLEY, AND DISTRICT BANK	'36	8	228,160

Joint Stock Banks, 1875—*Contd.*

4 Reserve and Balance after Last Dividend.	5 Number of Proprietors.	6 Number of Shares.	7 Amount per Share.	8 Paid-up per Share.	9 Dividend per Cent. per Annum for 12 Months, including Bonus.	10 Price per Share, August, 1875.	11 Premium per Cent.	12 Yield per Cent. at Price.			Num-ber.
£	No.	No.	£	£	Per cnt.	£	Per cnt.	£	s.	d.	
76,234	179	6,600	100	20	20	60	200	6	13	4	35
80,892	207	6,066	100	15	20	54½	263⅓	5	10	1	36
42,327	144	6,052	100	25	7	31¾	27	5	10	3	37
65,385	374	9,200	100	25	9½	40¼	61	5	18	–	38
39,000	314	20,000	10	5	12½	10¼	105	6	1	11¼	39
163,558	250	10,000	100	20	18	61	205	5	18	–	40
264,574	211	6,800	100	60	25	183	205	8	3	11	41
115,554	216	6,500	100	35	11¾	90	157 1/7	4	11	4	42
108,904	362	21,158	50	20	14⅜	60	200	4	15	10	43
106,445	410	15,000	25	10	18	28	180	6	8	7	44
70,000	297	12,000	20	10	14	24	140	5	16	8	45
183,080	458	25,000	20	10	17½	29¼	192½	5	19	8	46
124,269	330	17,000	100	22½	10	42½	88 8/9	5	5	10½	47
32,346	320	20,000	100	10	15	26	160	5	15	4½	48
85,014	193	8,000	50	12½	17½	38½	208	5	13	7½	49
37,273	77	2,705	100	15	20	52	246⅔	5	15	4½	50
50,000	252	15,000	20	12	11¼	25	108⅓	5	8	–	51
86,169	289	5,022	100	32	18¾	86	168¾	6	19	6¼	52
106,404	232	1,500 3,000	200 50	140 35	17	308 75	120 114 2/7	7	14 —	6½	53
55,581	326	7,328	100	25	15	57	128	6	11	7	54
13,049	90	2,500	100	14	10	21	50	6	13	4	55
20,000	184	5,000	50	12½	8	20	60	5	–	–	56
3,000	160	6,000	20	5	5	8	60	3	2	6	57
67,469	213	13,000	20	10	20	27	170	7	8	1¾	58
35,000	230	8,140	50	25	8	38	52	5	5	4	59
100,000	320	50,575	10	4	15	10½	162½	5	14	3½	60
34,477	208	10,000	50	10	8½	15¾	57½	5	7	11¼	61
71,400	225	1,250	200	70	25	280	300	6	5	–	62
102,577	307	10,000	20	20	16½	70	250	4	14	3¼	63
148,201	440	20,000 12,000	12½ 12½	12½ 5	14	33 14¾	164 195	5	6 —	–¾	64
87,000	296	5,000 10,000	100 25	40 7½	14	95 20	137½ 166⅔	5	17 —	10¾	65
17,000	144	8,960	20	6¼	12	13	108	5	15	4½	66
21,000	130	9,760	50	8	10	14¼	78⅛	5	12	3¼	67
14,555	60	3,200	20	10	12½	21½	115	5	16	3¼	68
18,612	324	15,600	20	5	9	8	60	5	12	6	69
146,056	726	26,500	25	5	16	18¼	265	4	7	8	70
200,000	1,130	50,000	50	8	20	26¼	228⅛	6	1	10¾	71
87,934	384	25,000 7,040	20 10	8 4	12½	16⅞ 8¼	111 —	5	18 —	5	72

TABLE III.—*Purely Provincial English*

Number.	Name. [*Italics*—Small or Large—denote Banks of Issue, CAPITALS—Italic or Plain—Banks which publish Balance Sheets.]	1 When Established.	2 Number of Offices.	3 Paid-up Capital.
	VI. Black Country—*Contd.*	Year.	No.	£
73	BIRMINGHAM BANKING COMPANY, *Limited*	1866	2	158,070
74	,, JOINT STOCK BANK, *Limited*	'61	3	203,900
75	Birmingham and Midland Bank	'36	3	300,000
76	*COUNTY OF STAFFORD BANK*	'36	1	60,000
77	*WOLVERHMPTN. AND STAFFDSH. BKG. CO.*	'32	1	100,000
78	STAFFORDSHIRE JOINT STOCK BANK, *Limited*	'64	9	174,500
79	*STOURBRIDGE AND KIDDERMINSTER BK.*	'34	14	100,000
	VII. Western and Southern Counties.			
80	Bala Banking Company, *Limited*	1864	3	8,155
81	Glamorganshire Banking Company	'36	6	250,000
82	Swansea Bank, *Limited*	'73	4	170,784
83	*Whitchurch and Ellesmere Banking Company*	'40	2	—
84	*Ludlow and Tenbury Bank**	'40	1	—
85	*WORCESTER CITY & COUNTY BANK, Limited*	'40	14	250,000
86	*W. OF ENGLAND AND S. WALES DIST. BK.*	'34	43	750,000
87	DEVON AND CORNWALL BANK	'32	15	128,000
88	*Helston Banking Company*	'36	2	—
89	THREE TOWNS' BANKING COMPANY, *Limited*	'63	2	50,000
90	*Stuckey's Banking Company*	'26	34	301,900
91	*County of Gloucester Bank*	'36	12	181,000
92	*Gloucestershire Banking Company*	'31	27	450,000
93	*North Wilts Banking ,,*	'35	16	85,000
94	*WILTS AND DORSET BANKING COMPANY*	'35	50	250,000
95	BUCKS AND OXON UNION BANK, *Limited*	'66	9	80,000
96	HAMPSHIRE BANKING COMPANY	'34	29	150,000
97	NORTH KENT BANK, *Limited*	'64	2	22,390
	Totals	—	823	19,361,993
			97 banks.	93 banks.
	Averages	—	8½	208,193

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* The general business of the Ludlow and Tenbury Bank is merged in the Worcester City and

Joint Stock Banks, 1875—*Contd.*

4	5	6	7	8	9	10	11	12			
Reserve and Balance after Last Dividend.	Number of Proprietors.	Number of Shares.	Amount per Share.	Paid-up per Share.	Dividend per Cent. per Annum for 12 Months, including Bonus.	Price per Share, August, 1875.	Premium per Cent.	Yield per Cent. at Price.			Number.
£	No.	No.	£	£	Per cnt.	£	Per cnt.	£	s.	d.	
132,866	569	31,614	50	5	15	14⅜	187½	5	4	4	73
221,219	581	20,390	100	10	20	33⅜	233¾	5	19	10	74
266,229	249	6,000	50	50	20	170	240	5	17	7¾	75
34,982	100	12,000	10	5	18	16⅛	222½	5	11	7½	76
41,526	162	10,000	50	10	10	18⅞	88¾	5	5	11½	77
64,542	273	10,000	100	20	8¾	29	45	6	–	8¼	78
96,582	191	10,000	25	10	20	28¼	182½	7	1	7	79
5,462	145	5,000 1,137	1 10	½ 5	10	—	—		—		80
184,874	226	2,000 10,000	100 10	100 5	15	200 15½	100 200	7 5	10 –	– –	81
31,453	716	28,464	20	6	7½	9	58⅓	4	14	8¾	82
—	32	—	20	3½	12½	6	71½	7	5	9¼	83
—	11	—	—	—	—	—	—		—		84
101,044	447	20,000	50	12½	12⅜	25½	100	6	3	9	85
150,356	1,808	50,000	20	15	14	28	90	7	7	4	86
83,000	320	4,000	100	32	16¼	80	150	6	10	–	87
—	9	—	—	—	—	—	—		—		88
900	163	2,000	50	25	5	18	Dis.	6	18	10¾	89
150,864	111	—	—	50	—	—	—		—		90
69,068	383	7,240	100	25	10	48	92	5	4	2	91
194,792	650	20,000	50	22½	13⅓	52⅞	135	5	13	5½	92
86,484	192	17,000	25	5	20	20	300	5	–	–	93
155,213	796	25,000	15	10	22	41½	315	5	6	–¼	94
18,100	350	16,000	25	5	20	17½	250	5	14	3½	95
40,220	281	15,000	50	10	16	30	200	5	6	8	96
1,600	30	2,239	50	10	8	12	20	6	13	4	97
9,150,236	32,105	—	—	—	—	—	—		—		
93 banks.					94 banks.			91 banks.			
98,390	331	—	—	—	14¼	—	—	5	17	3	

ounty Bank, but it has retained its note circulation, and in that respect has a separate existence.

TABLE IV.—*Scotch*

Number.	Name. [All are Banks of Issue, and all publish Balance Sheets.]	1 Date when Established.	2 Number of Offices.	3 Paid-up Capital.	4 Reserve and Balance after last Dividend.
		Year.	No.	£	£
1	*BANK OF SCOTLAND*	1695	77	1,000,000	401,493
2	*ROYAL BANK OF SCOTLAND*	1727	107	2,000,000	527,301
3	*BRITISH LINEN COMPANY BANK*	'46	68	1,000,000	430,311
4	*COMMERCIAL BANK OF SCOTLAND*	1810	101	1,000,000	407,294
5	*NATIONAL BANK*	'25	92	1,000,000	418,300
6	*ABERDEEN TOWN & COUNTY BK.*	'25	41	252,000	117,608
7	*UNION BANK OF SCOTLAND*	'30	117	1,000,000	403,195
8	*N. OF SCOTLAND BANKING CO.*	'36	47	320,000	100,295
9	*CLYDESDALE BANKING COMPANY*	'38	80	1,000,000	519,133
10	*CALEDONIAN BANKING COMPANY*	'38	22	150,000	78,362
11	*CITY OF GLASGOW BANK*	'39	123	1,000,000	461,519
	Totals	—	875	9,722,000	3,864,811
	Averages	—	79½	883,820	351,346

* Bonus of 2½ per cent., chiefly from a special fund. Ordinary

TABLE V.—*Irish Joint*

Number.	Name. [*Italics*—Small or Large—denote Banks of Issue, CAPITALS—Italic or Plain—Banks which publish Balance Sheets.]	1 Date of Establishment.	2 Number of Offices.	3 Paid-up Capital.	4 Reserve and Balance after last Dividend.
		Year.	No.	£	£
1	*Bank of Ireland*	1783	50	2,769,230	1,072,000
2	*Northern Banking Company*	1825	44	300,000	170,000
3	HIBERNIAN BANK	'25	32	500,000	239,216
4	*Provincial Bank of Ireland*	'25	44	540,000	213,255
5	*Belfast Banking Company*	'27	36	250,000	196,080
6	*NATIONAL BANK*	'35	106*	1,500,000	150,000
7	*ULSTER BANKING COMPANY*	'36	44	250,000	291,568
8	ROYAL BANK OF IRELAND	'36	5	300,000	200,670
9	MUNSTER BANK, *Limited*	'64	40	350,000	167,251
	Totals	—	401	6,759,230	2,700,040
	Averages	—	44½	751,025	300,004

* In

anks, 1875.

5 Number of Proprietors.	6 Number of Shares.	7 Amount per Share.	8 Paid-up per Share.	9 Dividend and Bonus per Cent. per Annum for 12 Months.	10 Price per Share, August, 1875.	11 Premium per Cent.	12 Yield per Cent. at Price.	Number.
No.	No.	£	£	Per cnt.	£	Per cnt.	£ s. d.	
1,409	Stock	—	100	14	305	205	4 11 10	1
1,468	,,	—	100	9½	220	120	4 6 4	2
1,208	,,	—	100	13	276	176	4 14 2	3
1,170	,,	—	100	15	304	204	4 18 8	4
1,623	,,	—	100	16	309½	209½	5 3 4	5
844	36,000	20	7	12½	18⅛	157½	4 16 4	6
1,250	Stock	—	100	15	272	172	5 10 4	7
1,420	80,000	20	4	12½	11⅞	196⅞	4 4 2	8
1,383	Stock	—	100	16½*	268	168	6 3 2	9
801	60,000	10	2½	14	7½	200	4 13 4	10
1,212	Stock	—	100	11	227½	127½	4 16 8	11
13,788	—	—	—	—	—	—	—	
1,253	—	—	—	13½	—	176	4 18 –	

vidend 14 per cent., at which yield per cent. *5l. 4s. 6d.*

tock Banks, 1875.

5 Number of Proprietors.	6 Number of Shares.	7 Amount per Share.	8 Paid-up per Share.	9 Dividend and Bonus per Cent. per Annum for 12 Months.	10 Price per Share, August, 1875.	11 Premium per Cent.	12 Yield per Cent. at Price.	Number.
No.	No.	£	£	Per cnt.	£	Per cnt.	£ s. d.	
—	Stock	—	100	13	306	206	4 5 –	1
718	5,000	92	30	15	91½	205	4 18 4	2
	5,000	100	30	7½	46	53⅓	4 17 8	
1,380	20,000	100	25	12	57½	130	5 4 4	3
2,000	20,000	100	25	18	88¼	253	5 2 –	4
	4,000	10	10		34¼	242½	5 5 1	
648	5,000	100	25	20	103¼	313	4 16 10	5
	5,000	100	25	8	41¼	65	4 16 11	
4,000	50,000	50	30	11	69½	131⅔	4 15 –	6
1,020	100,000	10	2½	20	10½	320	4 15 3	7
1,350	30,000	50	10	14½	29¾	197½	4 17 6	8
1,163	100,000	10	3½	12	8¾	150	4 16 –	9
12,279	—	—	—	—	—	—	—	
8 banks, 1,535	—	—	—	15	—	212	4 16 8	

reland.

Date of Establishment.

The first column in these five tables gives the date of establishment, and from it is compiled Table VI, showing the number of the existing banks founded previously to 1826, between 1826 and 1830, thence in successive periods of five years down to 1870, and in the four years 1871 to 1874.

TABLE VI.—*United Kingdom. Number of Existing Joint Stock Banks, December,* 1874, *exclusive of Bank of England, Classified according to Date of Establishment.*

Period of Establishment.	English Banks.				Scotch Banks.	Irish Banks.	Total, United Kingdom.
	Purely London.	London and Provincial.	Purely Provincial.	Total.			
Before 1826	—	—	—	—	6	4	10
1826–30	—	—	10	10	1	1	12
'31–35	1	1	26	28	—	1	29
'36–40	2	1	31	34	4	2	40
'41–45	—	—	3	3	1	—	4
'46–50	—	—	—	—	—	—	—
'51–55	1	—	—	1	—	—	1
'56–60	—	—	—	—	—	—	—
'61–65	4	4	18	26	—	1	27
'66–70	2	—	3	5	—	—	5
'71–74	2	1	8	11	—	—	11
	12	7	99	118	12	9	139
Before 1841	3	2	67	72	11	8	91
1841–60	1	—	3	4	1	—	5
Since 1860	8	5	29	42	—	1	43
	12	7	99	118	12	9	139

The following are the noteworthy features of this table. None of the English banks date from before 1826, as that was the year in which the establishment of joint stock banks in England was first made legal. Of the existing English banks seventy-two were founded during the period 1826 to 1840, three during the period 1841 to 1845, only one, the City Bank, London, from 1846 to 1860, and forty-two since 1860.

In Scotland six, and in Ireland four of the present banks were already in existence before 1826.

In Scotland eleven banks, being all the present banks of issue, were established before 1841. The North British Bank, established in 1845, does not carry on banking business, and is, I am informed, to all intents and purposes, in liquidation. No bank has been successfully established since that date. The monopoly of banking in Scotland, given to the eleven banks of issue by the legislation of 1845, is thus complete.

In Ireland eight of the nine banks were established before 1841, none from 1841 to 1860, and one since 1860, viz., the Munster Bank, Limited, in 1864. That only one bank in Ireland is of more recent foundation than 1845 is probably due in a great measure to the legislation of that year.

The lull in the establishment of joint stock banks in England between 1840 and 1862 is very remarkable. The gross abuse of joint stock banking prior to 1840 doubtless created an ignorant prejudice against its use. This prejudice was both evidenced and fostered by the course of the parliamentary inquiry of 1840 and by the speeches of Sir Robert Peel and others in the debates on the banking legislation of 1844. That legislation prevented the establishment of any new bank of issue, and the public were slow to learn that provincial banking could be profitably carried on without the privilege of issue. But by far the most powerful bar to progress lay in the liability of any shareholder to have judgment decrees and orders against the company enforced against him individually, whether he were a member at the time the cause of action arose, or had been a member within three years. This liability was abolished by an Act of 1857. The banking failures of 1847 and 1857 no doubt contributed likewise to retard the development of joint stock banking, and it was reserved for the much abused principle of limited liability under the sanction of the Companies Act of 1862 to inaugurate a fresh point of departure in the extension of joint stock bank enterprise. The forty-two banks of England and Wales, which date their foundation since 1860, are all limited companies, as also is the sole Irish bank established since that year.

Number of Banks.

Table VII has been compiled from the Banking Almanacs, to show the variations in number of joint stock and private banks in England and Wales since 1860.

Table VII.—*Number of Banks (Joint Stock and Private), excluding the Bank of England, existing in England and Wales, including the Isle of Man, but excluding the Channel Islands, at Dates as under.*

	1860.	1865.	1870.	1875.
Joint Stock—				
Purely London	7	11	12	12
London and provincial	2	9	8	7
Provincial	85	93	92	99
Total joint stock	94	113	112	118
Private—				
Purely London	53	46	47	55
Provincial	239	211	207	196
Total private	292	257	254	251
Total joint stock and private	386	370	366	369

It will be seen from Table VII that during the last fifteen years there has been a decided diminution in the number of private banks in the provinces of England and Wales. Against 239 provincial private banks in 1860, there are now only 196, showing a diminution of 43. Of these 28 disappeared between 1860 and 1865, 4 between 1865 and 1870, and 11 between 1870 and 1875.

The revival of joint stock banking after 1862 induced a good many private bankers to transfer their business to joint stock companies. This tendency received a rude but, as it appears, only a temporary check, from the events of 1866, which revealing a fearful amount of reckless and dishonest management on the part of new banks and financial companies, threw discredit for the time on the joint stock system. The public is now, however, convinced that it was neither the joint stock system nor its modern phase of limited liability which was at fault, but solely the vices of management. It must not be forgotten that two of the most scandalous smashes of 1866, those of Overend, Gurney, and Co., Limited, and Barned's Banking Company, Limited, were in reality failures of private banks, both concerns having been insolvent when within a year of their suspension they were converted into joint stock companies.

The joint stock banks in England and Wales have increased in number thus since 1860:—

Purely London	5
London and Provincial	5
Provincial, including Isle of Man	14
Total	24

It will probably be found that three or four have been added in the provinces during 1875.

Number of Bank Offices.

In the following table the number of bank offices and the average number of offices per bank are shown for the whole United Kingdom:—

TABLE VIII.—*Number of Banks and Bank Offices in the United Kingdom, December*, 1874.

Banks.	Number of Banks.	Number of Bank Offices.	Average Number of Offices per Bank.
England and Wales—			
JOINT STOCK—			
Bank of England	1	11	11
Purely London	12	40	3⅓
London and provincial	7	412	59
Purely provincial	97	823	8½
	117	1,286	11
Isle of Man	2	9	4½
Total joint stock	119	1,295	11
PRIVATE—			
Purely London	55	61	1
Provincial	196	523	2¾
Channel Isles	6	6	1
Total private	257	590	2¼
Total joint stock and private	376	1,885	5
Scotch—			
Joint stock	11	875*	79½
Private	—	—	—
Irish—			
Joint stock	9	409*	45
Private	3	3	1
Total Irish	12	412	34
Grand total	399	3,172	8

* Including London offices.

The joint stock bank with the largest number of offices is the London and County, with 149; next comes the National Provincial Bank of England, with 138; then the City of Glasgow Bank, with 123 (now 126). The Union Bank of Scotland has 117, and the National Bank (Ireland), 114. In the English provinces the banks having the largest number of offices are:—

Manchester and Liverpool District Bank	52
Wilts and Dorset Banking Company	50
West of England and South Wales District Bank	43

Twenty of the purely provincial English joint stock banks have no branches at all. These banks are chiefly in Liverpool and the manufacturing towns of Lancashire and Yorkshire.

TABLE IX.—*Proportion of Banks and Bank Offices to Inhabitants, December*, 1874.

Locality.	Number of Banks.	Number of Inhabitants to One Bank.	Number of Bank Offices.	Number of Inhabitants to One Bank Office.
England and Wales (including Bank of England)........	376	63,700	1,885	12,600
Scotland	11	317,750	873	4,000
Ireland	12	441,477	404	13,100
United Kingdom	399	82,000	3,162	10,300

These figures bring out in salient relief one great distinguishing characteristic of English as compared with Scotch and Irish banking. In England there are many small local banks and few banking offices. In Scotland and Ireland there are few or no small banks and many banking offices. The comparatively local character of English banking is in a great measure the result of the maintenance, till 1826, of the monopoly of the Bank of England, by the restriction of banking to private firms with not more than six partners.

In England a comparison with previous investigations gives the following results:—

England.		Number of Bank Offices.	Number of Inhabitants to One Bank Office.
1851.	Mr. Newmarch	962	18,700
'54.	Mr. Gilbart	—	16,500
'70.	Present Inquiry....	1,651	13,500
'75.	,, ...	1,885	12,600

In Scotland the progress in the number of bank offices, according to Table LXXVII, p. 188, which brings the figures down six months later than I have done, has been

Scotland.	Number of Bank Offices.	Number of Inhabitants to One Bank Office.
1845....................	382	7,178
'55....................	480	6,200
'65....................	654	4,870
'75....................	884	3,954

In Ireland a comparison with previous investigations gives these results :—

Ireland.	Number of Bank Offices.	Number of Inhabitants to One Bank Office.
1851. Mr. Newmarch	170	38,300
'72. Mr. Palgrave	365	14,800
'75. Present Inquiry....	404	13,100

Paid-up Capital.

The total paid-up capital shown by Tables I, II, III, IV, V, with the addition of that of four London discount companies and of the Bank of England, is as under :—

TABLE X.—*United Kingdom, Capital paid-up of Joint Stock Banks as under, August,* 1875. [000's omitted.]

Number of Banks.	Locality.	Paid-up Capital.	Average per Bank.
	England and Wales—	£	£
11	Purely London banks	7,364,	669,
7	London and provincial	4,425,	632,
93	Purely provincial	19,362,	208,
4	,, not stated, say	250,	50,
2	Isle of Man	59,	30,
117	Total England and Wales	31,460,	268,
11	Scotch	9,722,	884,
9	Irish	6,759,	751,
137	Total United Kingdom................	47,941,	350,
	To which add—		
4	London Discount Companies	2,717,	679,
141		50,658,	359,
	Add further—		
1	Bank of England	14,553,	14,553,
142	Grand total, United Kingdom....	65,211,	459,

Next to the Bank of England, the following are the banks with the largest paid-up capital :—

	£
Bank of Ireland	2,769,230
London and Westminster...	2,000,000
Royal Bank of Scotland	2,000,000
National Bank (Ireland)	1,500,000
National Provincial Bank of England...........................	1,462,500
London and County	1,425,000
Union Bank of London..	1,395,000
London Joint Stock	1,200,000
Seven Scotch banks, each	1,000,000
Manchester and Liverpool District	905,000
Alliance Bank, *Limited*..	800,000
West of England and South Wales District.............	750,000

Note.—Banks of issue are distinguished by *italics*.

The proportion of paid-up capital to population is :—

	Per head. £	s.
England and Wales, including Bank of England	1	18
" excluding "	1	6
Scotland	2	16
Ireland	1	6

The value of this comparison is much diminished by the circumstance that it cannot include private banks, of which there are 251 in England and Wales, none in Scotland, and 3 in Ireland.

Liability of Shareholders.

It will be seen from Table XI, that of the 139 joint stock banks of the United Kingdom, 84 are under unlimited and 55 under limited liability.

TABLE XI.—*Number of Limited and Unlimited Joint Stock Banks in the United Kingdom, December*, 1874.

Banks.	Unlimited.	Limited.
England and Wales—		
Bank of England	—	1
Purely London	4	8
London and provincial	2	5
Purely provincial	63	34
Isle of Man	—	2
Total England and Wales	69	50
Scotland	8	3
Ireland	7	2
Total number United Kingdom	84	55

All the joint stock banks established in England since 1860, 42 in number, are on the principle of limited liability, whilst the following seven old established banks have since 1862 transformed themselves into limited companies :—

	Established.
Cumberland Union Banking Company	1829
Liverpool Commercial Bank	'32
Halifax Commercial Banking Company	'36
Union Bank of Manchester	'36
Moore and Robinson's Nottinghamshire Bank	'36
Bank of Whitehaven	'37
Worcester City and County Bank	'40

The five banks printed in *italics* are banks of issue : but the Act of 1862 provides that the limitation of liability shall not apply to notes in circulation.

Adverse opinions have been expressed in various quarters, and even very recently, as to the soundness of applying the principle of limited liability to banking. The principle is, however, by no means an innovation. The liability of the proprietors in the Bank of England is absolutely limited to the capital paid up. The same is the case with the Bank of Ireland and with two Scotch banks, the Royal Bank of Scotland and the British Linen Company, both of which are incorporated by royal charter. In these four cases the proprietors are liable to no further calls in any event; the principle of limited liability is in fact pushed to its extreme. So far as I am aware, the only instance in which this extreme has been essayed by any bank established under the Companies' Act was that of the Metropolitan Bank, Limited. In that case the experiment did not succeed, and has been departed from. The Bank of Scotland is under limited liability, having been constituted by Act of Parliament. Its capital is 1,500,000*l.*, of which 500,000*l.* is uncalled. It should be explained that in the case of the three Scotch banks in which the liability is limited, there is no express limitation in the Act of Parliament or royal charter, as the case may be, but incorporation at the periods at which these banks were established may be held to infer limitation of liability, although some lawyers do not consider this point to be quite clear. Fortunately, the case has never had to be tried, and is never likely to be, considering the stability of the banks in question; but the report of the Committee of 1840 on Banks of Issue supports the view in favour of limited liability; Sir Robert Peel stated again and again, in the debates on the Bank Acts, that the liability of the three senior Scotch banks was limited, and these banks are specially exempted by the Act of 1845 from making any return of their partners, the reason being that the public could not look to the stockholders as individually responsible.

The obvious advantage of the system of limited liability is that each shareholder knows exactly the utmost amount he can possibly lose in the event of the failure of the bank. This unquestionably tends to attract as shareholders men of substance, who might decline to undertake an indefinite liability.

It cannot be denied, however, that from the creditor's point of view the limited bank exposes itself to unfavourable comparison with the unlimited bank, unless it maintains uncalled an adequate margin upon its shares. To ascertain what margin may fairly be deemed adequate, let us look at the calls made to liquidate banks which have failed in recent years. Through the kindness of the liquidators, or from other reliable sources, I am enabled to compile:—

Table XII.—*Calls made in Liquidation of Failed Banks.*

Failed Banks.	Date of Failure.	Amount per Share Paid-up at Date of Failure.	Total Calls per Share made during Liquidation.	Proportion of Calls to Paid-up Capital.	Amount per Share since Returned to Shareholders.
		£	£		£ *s.*
Liverpool Borough Bank	1857	10	5	0½	3 12
Royal Bank of Liverpool......	'67	10 original	15	1½	5 16
		100 preference	150	"	58 –
Overend, Gurney & Co., *L*.....	'66	15	25	1⅔	3 10
Birmingham Banking Co.	'66	10	10	1	1 –
Bank of London	'66	10	nil	nil	6 10*
Leeds Banking Company	'64	15	170	11½	10 –†
Northumberland and Durham Dist. Banking Co.	'57	10	40	4	nil‡
Western Bank of Scotland....	'57	50	125	2½	68 –

* In addition to an apportionment of Atlantic and Great Western shares and bonds.

† A most exceptional case of mismanagement.

‡ Paid creditors 19*s.* 8*d.* per pound.

Barned's Banking Company, Limited, is not included in this table, because its business proved to have been hopelessly insolvent at the time it was taken over from Messrs. Barned and Co., a year before the failure of the Company. The case of the Leeds Banking Company is so extremely exceptional that it may fairly be left out of view. The calls required in the other cases were :—

Northumberland and Durham	4 times the paid-up capital.
Western Bank of Scotland	2½ "
Overend, Gurney, and Co., Limited	1⅔ "
Royal Bank of Liverpool	1½ "
Birmingham Banking Company	equal to the paid-up capital.
Liverpool Borough Bank	half of "
Bank of London..	no calls.

From these data the conclusion seems to be justified that a limited bank with an uncalled margin of three times the amount paid up on its shares is, *cæteris paribus*, so far as regards security to its creditors, practically as safe as an unlimited bank.

The following table contains a list of the limited banks of the United Kingdom, with the amount per share, the amount called per share, and the ratio of the uncalled margin to the amount paid up :—

TABLE XIII.—*England and Wales, Limited Banks, Proportion of Uncalled to Paid-up Capital*, 1875.

	Limited Banks. [Banks of Issue in *Italics*.]	Amount per Share.	Paid-up per Share.	Ratio of Uncalled Margin to Amount Paid-up.
	Purely London—	£	£	Per cnt.
1	Imperial	50	15	233
2	Alliance	25	10	150
3	Central	10	5	100
4	Metropolitan	10	10	Nil
		10	1½	566
5	St. James'	20	10	100
6	West London Commercial	10	6	66
7	Merchant Banking Company	100	25	300
	London and Provincial—			
1	London and South Western	100	20	400
2	Consolidated	10	4	150
3	Midland	100	20	400
4	London and Provincial	10	5	100
5	,, Yorkshire	50	9	455
	Purely Provincial—			
1	*Cumberland Union*	30	12½	140
2	*Bank of Whitehaven*	30	10	200
3	North Eastern, Newcastle	20	6	233
4	Industrial Bank, Newcastle	5	3	66
5	Northern Counties	50	30	66
6	Liverpool Commercial	20	10	100
7	North Western, Liverpool	20	7½	166
8	National of Liverpool	25	15	66
9	Adelphi, Liverpool	20	10	100
10	Manchester and County	100	15	566
11	Union of Manchester	25	11	127
12	Manchester Joint Stock	20	6	233
13	Lancashire and Yorkshire	20	10	100
14	Parr's Banking Company	100	20	400
15	Rochdale Joint Stock	20	4	400
16	Bank of Leeds	100	25	300
17	Leeds and County	100	25	300
18	Exchange and Discount, Leeds	10	5	100
19	Bradford District	100	35	186
20	,, Old	50	20	150
21	*Halifax Commercial*	20	10	100
22	Derby Commercial	20	5	300
23	*Moore and Robinson's, Notts*	10	4	150
24	Nottingham Joint Stock	50	10	400
25	Lloyd's, Birmingham	50	8	525
26	Birmingham Banking Company	50	5	900
27	,, Joint Stock Bank	100	10	900
28	Staffordshire ,,	100	20	400
29	Bala Banking Company	10	5	100
30	Swansea	20	6	233
31	*Worcester City and County*	50	12½	300
32	Three Towns'	50	25	100
33	Bucks and Oxon Union	25	5	400
34	North Kent	50	10	400

We find from Table XIII that out of forty-six limited banks of England and Wales, twenty-six have a smaller margin of capital uncalled than three times the amount paid up, whilst eighteen have an uncalled margin equal to or greater than three times the amount paid up. Whilst deeming it instructive to work out these figures, I must distinctly disclaim any insinuation whatever that any of the established banks which fall below the assumed standard of uncalled margin is not in a sound position as regards its capital. It is impossible to lay down any hard and fast line on the subject, but it may be suggested that in the future establishment of banks on the principle of limited liability, it would be well to keep in view that the maintenance of a large margin of uncalled capital is most desirable, if not essential, in order to secure the confidence of the public.

Even in the case of unlimited banks, it is very expedient to have some uncalled margin on the shares, so that the directors may be enabled, if necessary, to obtain an accession to the paid-up capital without creating and placing new shares,—a process which, under certain circumstances, might be undesirable, if not impracticable, and in any case would be a much less expeditious method of raising money than a call upon existing shares. In an unlimited bank, probably an uncalled margin equal in amount to the sum paid up, would be very ample.

From Table XIV, it will be found that amongst the unlimited banks no London or London and provincial bank has an uncalled margin of capital of less than the amount paid up, whilst amongst the purely provincial unlimited banks six have no margin uncalled, nine have less uncalled than the amount paid up, forty-four have more, and for three we have not the figures.

The details are as follows:—

TABLE XIV.—*England and Wales. Unlimited Banks. Proportion of Uncalled to Paid-up Capital*, 1875.

	Unlimited Banks. [Banks of Issue in *Italics*.]	Amount per Share.	Paid-up per Share.	Uncalled per Share.	Ratio per Cent. of Uncalled to Paid-up.
	Purely London.	£	£	£	Per cnt.
1	London and Westminster	100	20	80	400·0
2	„ Joint Stock	50	15	35	233·3
3	Union	50	15½	34½	222·5
4	City	20	10	10	100·0
	London and Provincial.				
1	National Provincial Bank	50	21	29	138·0
2	London and County	50	20	30	150·0

TABLE XIV.—*England and Wales. Unlimited Banks—Contd.*

	Unlimited Banks. [Banks of Issue in *Italics.*]	Amount per Share.	Paid-up per Share.	Uncalled per Share.	Ratio per Cent. of Uncalled to Paid-up.
	Purely Provincial.	£	£	£	Per cnt.
1	*Carlisle City and District Bank*	25	12½	12½	100·0
2	,, *and Cumb. Banking Compy.*	20	5	15	300·0
3	*Whitehaven Joint Stock Bank*	100	15	85	566·7
4	*Bank of Westmoreland*	100	12	88	733·3
5	Bank of Liverpool	100	12½	87½	700·0
6	Liverpool Union Bank	20	20	—	fully paid up
7	*North and South Wales Bank*	10	10	—	,,
8	Manchester and Liverpool Dist. Bank.	20	10	10	100·0
9	,, Salford Bank	20	8	12	150·0
10	*Lancaster Banking Company*	25	25	—	fully paid up
11	Preston Banking Company	100 25	100 25	—	,,
12	Bank of Bolton	20	15	5	33·3
13	Bury Banking Company	10	6	4	66·6
14	Ashton, Stalybridge, &c., Bank	10	4	6	150·0
15	*Darlington District Bank*	100	17	83	488·2
16	*Swaledale, &c., Banking Company*	100	7½	92½	1233·3
17	*Knaresboro' and Claro Banking Co.*	?	20	?	?
18	*Yorkshire Banking Company*	25	12½	12½	100·0
19	*York City and County Bank*	100	25	75	300·0
20	,, *Union Banking Company*	100	20	80	400·0
21	*Hull Banking Company*	100	15	85	566·7
22	*Bradford Commercial Banking Co.*	100	20	80	400·0
23	,, *Banking Company*	100	60	40	66·7
24	*Halifax Joint Stock Bank*	25	10	15	150·0
25	,, *and Huddersfield Union*	20	10	10	100·0
26	*Huddersfield Banking Company*	100	22½	77½	344·4
27	*West Riding Union*	100	10	90	900·0
28	*Wakefield and Barnsley Union*	50	12½	37½	300·0
29	*Barnsley Banking Company*	100	15	85	566·7
30	Sheffield Union Banking Company	20	12	8	66·7
31	*Sheffield and Rotherham Bankg. Co.*	100	32	68	212·6
32	,, *Banking Company*	200 50	140 35	60 15	42·9 42·9
33	,, *and Hallamshire*	100	25	75	300·0
34	*Chesterfield and North Derby*	100	14	86	614·3
35	*Derby and Derbyshire*	50	12½	37½	300·0
36	*Burton, Uttoxeter, &c.*	20	10	10	100·0
37	*Nottingham and Notts Banking Co.*	50	25	25	100·0
38	*Lincoln and Lindsey* ,,	200	70	130	185·7
39	*Stamford, Spalding, &c.* ,,	20	20	—	fully paid up
40	*Pares's Leicestershire Banking Co.*	12½ 12½	12½ 5	— 7½	,, 150·0
41	*Leicestershire* ,,	100 25	40 7½	60 17½	150·0 233·3
42	*Coventry Union* ,,	20	6¼	13¾	220·0
43	,, *and Warwickshire*	50	8	42	525·0
44	*Leamington Priors and Warwickshire*	20	10	10	100·0
45	*Northamptonshire Banking Company*	20	5	15	300·0
46	,, *Union Bank*	25	5	20	400·0
47	Birmingham, Dudley, and District	20 10	8 4	12 6	150·0 150·0

Table XIV.—*England and Wales. Unlimited Banks—Contd.*

	Unlimited Banks. [Banks of Issue in *Italics*.]	Amount per Share.	Paid-up per Share.	Uncalled per Share.	Ratio per Cent. of Uncalled to Paid-up.
	Purely Provincial—*Contd.*	£	£	£	Per cnt.
48	Birmingham and Midland	50	50	—	fully paid up
49	*County of Stafford*	10	5	5	100·0
50	*Wolverhampton and Staff. Bkg. Co.*	50	10	40	400·0
51	*Stourbridge and Kidderminster*	25	10	15	150·0
52	Glamorganshire Banking Company	100	100	—	fully paid up
		10	5	5	100·0
53	*Whitchurch and Ellesmere Bkg. Co.*	20	3½	16½	471·4
54	*West of England and S. Wales Dist.*	20	15	5	33·3
55	Devon and Cornwall	100	32	68	212·5
56	*Helston Banking Company*	?	?	?	?
57	*Stuckey's* ,,	?	50	?	?
58	*County of Gloucester*	100	25	75	300·0
59	*Gloucestershire Banking Company*	50	22½	27½	122·2
60	*North Wilts* ,,	21	5	20	400·0
61	*Wilts and Dorset* ,,	15	10	5	50·0
62	Hampshire Banking Company	50	10	40	400·0

Reserve-Fund.

The totals of reserve-fund, shown by Tables I, II, III, IV, and V, adding those of the four chief London Discount Companies and that of the Bank of England, are as follows:—

Table XV.—*United Kingdom Joint Stock Banks. Reserve Fund, August*, 1875. [000's omitted.]

Number of Banks.	Locality.	Reserve Fund.	Average per Bank.	Ratio to Paid-up Capital.
	England and Wales—	£	£	Per cnt.
11	Purely London	2,139,	194,	29
7	London and provincial	1,684,	241,	38
93	Purely provincial	9,150,	98,	47
2	Isle of Man	20,	10,	33
113	England and Wales	12,993,	115,	42
11	Scotch	3,865,	351,	40
9	Irish	2,700,	300,	40
133	United Kingdom (4 purely provincial English not included)	19,558,	147,	41
	To which add—			
4	London Discount Companies	668,	167,	24
137		20,226,	150,	40
	Add further—			
1	Bank of England	3,104,	3,104,	21
138	Grand total	23,330,	170,	36

It may not be superfluous to exhibit the paid-up capital and reserve fund together:—

TABLE XVI.—*United Kingdom Joint Stock Banks. Paid-up Capital and Reserve Fund, August,* 1875.

[000's omitted.]

Number of Banks.	Locality.	Paid-up Capital.	Reserve Fund.	Together.
	England and Wales—	£	£	£
11	Purely London	7,364,	2,139,	9,503,
7	London and provincial	4,425,	1,684,	6,109,
97	Purely provincial	19,612,	9,150,	28,762,
2	Isle of Man	59,	20,	79,
117		31,460,	12,993,	44,453,
11	Scotch	9,722,	3,865,	13,587,
9	Irish	6,759,	2,700,	9,459,
137	United Kingdom	47,941,	19,558,	67,499,
	To which add—			
4	London Discount Companies	2,717,	668,	3,385,
141		50,658,	20,226,	70,884,
	Add further—			
1	Bank of England	14,553,	3,104,	17,657,
142	Grand total	65,211,	23,330,	88,541,

The purposes of a reserve-fund are—1, to enable a bank to meet large and exceptional losses without an infringement on its paid-up capital, or with as little reduction in dividend as possible; 2, thereby to give steadiness to the market value of the shares; 3, to increase the basis of proprietors' funds upon which the liabilities rest, and so to strengthen public confidence in the stability of the bank.

Generally speaking, the reserve-fund is formed by the gradual accumulation of undivided profits; but so essential a feature is it now deemed to be, that there have been several recent instances in which, on the establishment of a new bank, the shares have been issued at a small premium in order to create a reserve-fund at the very outset. This practice seems to be a sound one, and it can readily be carried into effect in most cases, and especially where the bank is formed to take over an existing business. When the shares of an established bank have attained a fair premium in the market, and an increase of capital is found desirable, a considerable accession to the reserve fund may be very advantageously secured by issuing new shares at a premium, and carrying the amount of the premium to reserve-fund. This has recently been done by many of the English provincial banks. The new shares are frequently allotted amongst the shareholders at a price considerably below their actual market value, and thus the operation, besides its other advantages, yields a welcome bonus to the proprietors.

It is worthy of remark that in the case of the following purely provincial English banks, the reserve-fund, including undivided profit carried forward, exceeds or nearly equals the paid-up capital.

Banks. [Banks of Issue printed in *Italics*.]	Paid-up Capital.	Reserve and Balance Forward.	Dividend and Bonus per Cent.
	£	£	£
1. *Carlisle City and District Bank*	80,162	93,025	20
2. ,, *and Cumberland Bankg. Co.*	75,000	103,836	21
3. *Bank of Whitehaven, Limited*........	98,530	96,797	20
4. *Lancaster Banking Company*	275,000	276,216	30
5. Bury Banking Company	109,080	120,000	23
6. *York Union Banking Company*	90,990	80,892	20
7. *Barnsley Banking Company*............	40,575	37,273	20
8. *Northamptonshire Union*	132,500	146,056	16
9. Birmingham Joint Stock Bank........	203,900	221,219	20
10. ,, and Midland Bank	300,000	266,229	20
11. *Stourbridge and Kidderminster*........	100,000	96,582	20
12. *North Wilts*..	85,000	86,484	20

Nine of these twelve banks are banks of issue. As might naturally be supposed, the banks which have reserve-funds so large in relation to their paid-up capital, are found to pay very high dividends. In the above list eight of the banks pay 20 per cent., one 21, one 23, and one 30 per cent.

In ordinary circumstances, a reserve fund equal to one-half the paid-up capital is quite ample. When it considerably exceeds that proportion, it may be good policy to capitalise a portion of it, and several instances might be adduced of English country banks which have treated part of their accumulated profits in that way.

Number of Proprietors.

Table XVII.—*United Kingdom Joint Stock Banks. Number of Proprietors, December*, 1874.

Locality.	Proprietors.	Average per Bank.	Proportion of Proprietors to Population.
	No.	No.	1 Proprietor in
England and Wales—			
Purely London	14,007	1,167	—
London and provincial..............................	10,843	1,549	—
Purely provincial	32,105	331	—
Isle of Man	574	287	—
Total for England and Wales (excluding Bank of England)	57,529	487	416
Scotland	13,788	1,253	253
Ireland (exclusive of Bank of Ireland not ascertained)	12,279	1,535	433
Total for United Kingdom	83,596	610	391

The figures in the last column indicate that banks are more popular as investments with the Scotch than with the English or Irish.

Dividend.

TABLE XVIII.—*United Kingdom Joint Stock Banks. Dividend per Cent. per Annum, including Bonus, Twelve Months ending June,* 1875.

Locality.	Lowest.	Highest.	Average.
England and Wales.			
Purely London—			
3 senior banks	15	18½	16½
8 others	5	10	7¾
Total 11 banks	5	18½	11
London and provincial—			
2 senior banks (unlimited)	18	23	20½
5 other banks (limited)	4	10	8⅕
Total 7 banks	4	23	11 5/7
Purely provincial—			
51 issuing banks	8	30	16½
43 non-issuing banks	3¾	23	11⅝
Total 94 purely prov^1. banks.	3¾	30	14¼
Scotland, 11 banks	9½	16½	13½
Ireland, 9 banks	11	20	15

The absolutely highest dividends are:—

	Per Cent.
Lancaster Banking Company	30
Whitehaven Joint Stock	25
Bradford Banking Company	25
Lincoln and Lindsey Bank	25
Yorkshire Banking Company	24
National Provincial Bank of England	23
Bury Banking Company	23
Wilts and Dorset Banking Company	22
Carlisle and Cumberland Banking Company	21

Note.—Banks of issue printed in *italics.*

Market Price.

For the purpose of comparison the premium per cent. on the capital paid up is the readiest measure of the market price. The averages are as follows:—

Table XIX.—*United Kingdom Joint Stock Banks. Premium per Cent. on Paid-up Capital, August*, 1875.

Locality.	Highest Premium per Cent.	Average Premium per Cent.
England and Wales.		
Purely London—		
3 senior banks	222½	206⅔
5 others	60	35
1 ,, at a discount	—	—
2 ,, no return	—	—
London and provincial—		
2 senior banks, unlimited	305	257½
4 others, limited	90	59
1 ,, at a discount	—	—
Purely provincial—		
49 issuing banks	520	182
5 ,, no return	—	—
39 non-issuing banks	300	112
1 ,, no return	—	—
2 ,, at a discount	—	—
1 ,, at par	—	—
Scotland	209½	176
Ireland	320	212

It is worthy of remark that only four of the banks in our tables are at a discount. For eight there is no market price ascertained. The absolutely highest premium is that of the Lancaster Banking Company, 520 per cent.—their 25*l.* share selling at 155*l.*

Yield to Investor.

Table XX.—*United Kingdom Joint Stock Banks. Yield per Cent. to Purchaser at Market Price of August*, 1875, *and at the Rate of Dividend and Bonus per Cent. per Annum paid for previous Twelve Months.*

Banks.	Lowest Yield.	Highest Yield.	Average Yield.
England and Wales.	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
Purely London—			
3 senior banks	4 19 3	5 17 11	5 7 7
5 others	5 – –	6 18 6	6 5 4
8 banks	4 19 3	6 18 6	5 18 8
London and provincial—			
2 senior banks	5 13 7	5 16 2	5 14 10
5 others	5 5 3	6 13 4	6 1 4
7 banks	5 5 3	6 13 4	5 19 6
Purely provincial—			
49 issuing banks	4 7 8	8 3 11	5 18 6
42 non-issuing banks	3 2 6	9 4 8	5 15 10
91 banks	3 2 6	9 4 8	5 17 3
Scotland, 11 banks	4 4 2	6 3 2	4 18 –
Ireland, 9 banks	4 5 –	5 4 4	4 16 8

Whilst the smallness of the yield to the investor at the market price, and dividend and bonus per cent., may be taken in the case of established banks to be the test of the estimation in which the bank stands in the eyes of the public, allowance must be made for the circumstance that in very recently established banks the market price generally represents, more or less, the expectation rather than the actual realisation of success.

The absolutely lowest yield to the investor amongst the English banks was, at the date of my figures, 3*l.* 2*s.* 6*d.* per cent., in the case of the Derby Commercial Bank, *Limited.*

The absolutely highest yield is 9*l.* 4*s.* 8*d.* per cent. in the case of the Industrial Bank, *Limited*, Newcastle-on-Tyne.

The appreciably lower yield shown by the Scotch and Irish banks evidences the greater popularity of bank shares as an investment in these parts of the United Kingdom.

I revert to the yield to the purchaser, and the circumstances which regulate it, in dealing with the tables of banks which publish balance sheets.

Circulation of Notes.

The following is the number of the joint stock banks of issue of the United Kingdom:—

Bank of England	1
Of the ninety-seven purely provincial English banks	54
All the Scotch banks	11
Of the nine Irish banks	6
Total joint stock banks of issue	72

The circulation of these banks was as follows on the average of the year 1874. (See Mr. Palgrave's Tables):—

Joint Stock Banks.	Fixed Authorised Issue.	Actual Average Circulation, 1874, as per Mr. Palgrave's Tables.
	£	£
1 Bank of England	15,000,000	26,264,000
54 English provincial	2,662,707	2,360,000
11 Scotch	2,749,271	5,900,000
6 Irish	6,354,494	6,769,000
Total joint stock banks	26,766,472	41,293,000

This branch of my subject is fully discussed in Section VII.

II. PUBLISHED BALANCE SHEETS OF JOINT STOCK BANKS.

Tables.

All the purely London joint stock banks are understood to publish balance sheets, but I have been able to obtain those of only seven, which are tabularised and analysed in Tables XXI, XXII, and XXIII.

All the seven London and provincial banks publish balance sheets, and these are treated in Tables XXIV, XXV, and XXVI.

Of the ninety-seven purely provincial English banks in Table III, fifty-six publish their balance sheets, and forty-one, so far as I have been able to discover, do not. Of the fifty-four English banks of issue, twenty-two publish balance sheets and thirty-two

TABLE XXI.—*Purely London Joint Stock Bank Balance*

[000's omitted, thus

Number.	Purely London Banks.	1 When Established.	2 Subscribed Capital.	3 Uncalled Capital.	4 Liabilities. Paid-up Capital.
1	London and Westminster Bank	1834	10,000,	8,000,	2,000,
2	London Joint Stock Bank	'36	4,000,	2,800,	1,200,
3	Union Bank of London	'39	4,500,	3,105,	1,395,
4	City Bank	'55	1,200,	600,	600,
5	Imperial Bank, *Limited*	1862	2,250,	1,575,	675,
6	Central Bank, *Limited*	'63	200,	100,	100,
7	Alliance Bank, *Limited* *	'71	2,000,	1,200,	800,
	Totals	—	24,150,	17,380,	6,770,
	Averages	—	7,450,	2,483,	967,

* 49,450*l.* appearing on both sides of balance sheet as outstanding

† Estimated.

appear not to do so. Of the forty-three banks of non-issue, thirty-four publish balance sheets and nine seem not to do so. In Tables XXVII, XXVIII, and XXIX have been summarised and analysed the balance sheets of forty-nine purely provincial English banks, of which twenty-two are banks of issue and twenty-seven are banks of non-issue, twenty-four are unlimited banks, and twenty-five are limited banks. For facility of comparison the banks are classified in districts as in Table III.

The balance sheets of the Scotch banks, all of which publish their accounts, will be found in Table XXX and their analysis in Table XXXI.

Of the nine Irish banks, the balance sheets of only five are published. These are treated in Tables XXXII, XXXIII, and XXXIV.

Sheets for Twelve Months ending December, 1874.

30,235 = 30,235,000*l.*]

5	6	7	8	9	10	11	12	
Liabilities.				Assets.				
Reserve, including Balance of Profit Carried Forward.	Money Lodged, including Dividend Due.	Acceptances.	Total Resources.	Bills and Advances.	Government and other Securities.	Cash.	Property Account.	Number.
1,015,	30,235,	1,038,	34,288,	26,428,	3,999,	3,861,	—	1
515,	16,132,†	4,527,†	22,374,	18,871,	1,080,	2,297,	126,	2
482,	14,227,	4,957,‡	21,061,	12,698,	2,941,	5,139,	283,	3
174,	3,318,	3,261,	7,353,	6,181,	329,	788,	54,	4
94,	2,142,	1,068,	3,979,	3,309,	72,	577,	22,	5
23,	773,	—	896,	591,	82,	186,	37,	6
191,	1,922,	532,	3,445,	2,726,	81,	638,	—	7
2,494,	68,749,	15,383,	93,396,	70,804,	8,584,	13,486,	522,	
356	9,821,	2,198,	13,342,	10,115,	1,226,	1,927,	—	

accounts of old bank to be realised is omitted in these columns.

‡ Cover in hand, amounting to 7,590,154*l.*

TABLE XXII.—*Purely London Joint Stock Bank Balance Sheets*

[00's omitted in Columns 2 and 4.]

Number.	Purely London Banks.	1 Analysis. Ratio per Cent. of Reserve Fund to Paid-up Capital.	2 Net Profit, less Charges. [00's omitted.]	3 Ratio per Cent. per Annum of Net Profits to Total Resources.	4 Charges or Working Expenses. [00's omitted.]	5 Ratio per Cent. of Charges to Net Profits.	6 Ratio per Cent. per Annum of Charges to Liabilities to Public.
		Per cnt.	£	Per cnt.	£	Per cnt.	Per cnt.
1	London and Westminster Bank....	51	412,0	1·20	151,5	36·8	0·48
2	London Joint Stock Bank	43	269,2	1·20	88,8	33·0	0·43
3	Union Bank of London	34	255,5	1·21	Not stated	—	—
4	City Bank	29	61,6	0·84	42,6	69·1	0·65
5	Imperial Bank, *Limited*	14	59,4	1·50	23,3	39·2	0·72
6	Central Bank, *Limited*	23	11,3	1·26	14,2	126·0	1·84
7	Alliance Bank, *Limited* *	24	66,3	1·92	27,6	41·6	1·12
	Totals	—	1,135,3	—	6 Banks 348,0	—	—
	Averages	37	162,2	1·22	—	6 Banks 39·6	6 Banks 0·54

* 49,450*l.* appearing on both sides of balance sheet as outstanding

TABLE XXIII.—*Purely London Joint Stock Banks. Profits, Dividends, and Prices, January*, 1875.

Number.	Purely London Banks.	1 Dividends and Prices. Ratio per Cent. of Net Profits to Paid-up Capital.	2 Dividend per Cent. per Annum, including Bonus.	3 Amount per Share Paid.	4 Market Price, Jan., 1875, Ex. Div.	5 Premium per Cent.	6 Yield per Cent. at Market Price.		
							£	*s.*	*d.*
1	London and Westminster Bank....	20·6	21	20	75	275	5	12	–
2	London Joint Stock Bank	22·4	21	15	51	240	6	3	6
3	Union Bank of London	18·3	17½	15½	45	190⅓	6	–	6
4	City Bank.........	10·3	10	10	13¼	32½	7	10	11
5	Imperial Bank, *Limited*	8·8	8	15	18	20	6	13	4
6	Central Bank, *Limited*	11·3	8	5	8	60	5	–	–
7	Alliance Bank, *Limited*	8·3	8	10	13	30	6	3	1
	Totals	—	—	—	—	—	—		
	Averages	16·8	13⅓	—	—	—	6	3	4

for Twelve Months ending December, 1874, *Analysis.*

[000's omitted in Columns 8, 9, 10, and 13.]

7	8	9	10	11	12	13	14	
				Analysis.				
Number of Establishments.	Average Liabilities to Public at each Office.	Liabilities to Public.	Proprietors' Funds.	Ratio per Cent. of Proprietors' Funds to Liabilities to Public.	Ratio per Cent. of Uncalled Capital to Liabilities to Public.	Government Securities, Cash, &c.	Ratio per Cent. of Government Securities, Cash, &c., to Liabilities to Public.	Number.
No.	£	£	£	Per cnt.	Per cnt.	£	Per cnt.	
8	3,909,	31,273,	3,015,	9·6	25·6	7,860,	25·1	1
6	3,443,	20,659,	1,715,	8·3	13·6	3,377,	16·3	2
5	3,837,	19,184,	1,877,	9·8	16·2	8,080,	42·1	3
6	1,096,	6,579,	774,	11·8	9·1	1,117,	17·0	4
3	1,070,	3,210,	769,	24·0	49·1	649,	20·2	5
5	155,	773,	123,	16·0	13·0	268,	34·8	6
1	2,454,	2,454,	990,	40·4	48·9	719,	29·3	7
34	—	84,133,	9,263,	—	—	22,070,	—	
5	2,474,	12,019,	1,323,	11·0	20·7	3,153,	26·2	

accounts of old bank to be realised, is omitted in these columns.

TABLE XXVI.—*London and Provincial Joint Stock Banks. Profits, Dividends, and Prices.*

		1	2	3	4	5	6
Number.	London and Provincial Banks.	Ratio per Cent. of Net Profit to Paid-up Capital.	Dividend per Cent. per Annum, including Bonus.	Amount per Share Paid.	Market Price, January, 1875.	Premium per Cent.	Yield per Cent. at Price.
		Per cnt.	Per cnt.	£	£	Per cnt.	£ s. d.
1	National Prov. Bank of England..	24·41	23	21 12 3	84 48 29½	300 300 883	5 15 – 2 6 9
2	London and County Bank	18·58	20	20	65¾	228¾	6 1 8
3	Consolidated Bank, *Limited*	11·18	10	4	6⅞	72	5 16 4
4	Midland Banking Co., *Limited*	9·60	9	20	27½	37½	6 10 11
5	London and South-Western, *Limd.*	9·81	7½	20	22½	12½	6 13 4
6	" Provincial B., *Limd.*	14·66	10	5	8¼	65	6 1 3
7	" Yorkshire B., *Limd.*	3·96	4	9	6	Dis.	6 – –
	Totals	—	—	—	—	—	—
	Averages	17·6	12	—	—	119⅓	6 2 8

Table XXIV.—*London and Provincial Joint*

[000's omitted thus

Number.	London and Provincial Banks.	1 When Estab-lished.	2 Subscribed Capital.	3 Uncalled Capital.	4 Liabilties. Paid-up Capital.	5 Liabilties. Reserve, including Balance of Profit Carried Forward.
1	National Provincial Bank of England .... Capital. 20,000 shares at 50*l.* = 1,000,000*l.* 77,500 „ 20*l.* = 1,550,000*l.* 28,125 „ 20*l.* = 562,500*l.*	1833	3,112,	1,734,	1,378,	792,
2	London and County Bank	'36	3,750,	2,402,	1,348,	697,
3	Consolidated Bank, *Limited*	1863	2,000,	1,200,	800,	118,
4	Midland Banking Co., *Limited*	'63	1,500,	1,200,	300,	45,
5	London and South-Westn., *Limd.*	'62	831,	665,	166,	14,
6	„ Provincial B., *Lim.*...	'64	300,	150,	150,	31,
7	„ Yorkshire B., *Lim.*....	'72	632,	518,	114,	2,
	Totals	—	12,125	7,869,	4,256,	1,699,
	Averages	—	1,732,	1,124,	608,	243,

* Includes

Table XXV.—*London and Provincial Joint Stock*

[00's omitted in Columns 2 and 4, thus 336,5 = 336,500*l.*]

Number.	London and Provincial Banks.	1 Ratio per Cent. of Reserve Fund to Paid-up Capital.	2 Net Profit, less Charges, [000's omitted.]	3 Ratio per Cent. per Annum of Net Profits to Total Resources.	4 Charges or Working Expenses. [00's omitted]	5 Ratio per Cent. of Charges to Net Profits.	6 Ratio per Cent. per Annum of Charges to Liabilities to Public.
		Per cnt.	£	Per cnt.	£	Per cnt.	Per cnt.
1	National Prov. Bank of England..	57	336,5	1·28	298,9	88·8	1·24
2	London and County Bank	52	250,5	1·00	245,6	98·0	1·08
3	Consolidated Bank, *Limited*	15	89,4	2·09	29,3	32·8	·87
4	Midland Banking Co., *Limited*	15	28,8*	1·62	25,9	90·0	1·81
5	London and South-Westn., *Limd.*	8	16,3	1·48	23,1	141·7	2·52
6	„ Provincial B., *Lim.*...	20	22,0	1·46	30,5	138·7	2·30
7	„ Yorkshire B., *Lim.*....	2	4,5	0·88	10,3	228·9	2·62
	Totals	—	748,0	—	663,6	—	—
	Averages	40	106,9	1·24	—	88·7	1·22

* Without deduction of 5,000*l.* taken from reserve fund to cover exceptional loss.

Stock Banks. Balance Sheets for year 1874.

3,112, = 3,112,000*l*.]

6	7	8	9	10	11	12	
Liabilities.			Assets.				
Money Lodged, including Dividend due.	Acceptances.	Total Resources.	Bills and Advances.	Government and other Securities.	Cash, &c.	Property Account.	Number.
23,063,	1,043,	26,276,	15,637,	6,056,	4,168,	415,	1
20,072,	2,780,	24,897,	16,893,	2,083,	5,512,	408,	2
3,113,	246,	4,277,	3,089,	209,	807,	181,	3
1,432,	—	1,778,	1,518,	—	229,	30,	4
916,	1,	1,097,	804,	—	261,	33,	5
1,329,	—	1,510,	926,	364,	198,	22,	6
393,*	—	508,	437,	—	55,	16,	7
50,318,	4,070,	60,344,	39,304	8,712,	11,230,	1,105,	
7,188,	—	8,621,	—	—	—	—	

acceptances.

Banks. Analysis of Balance Sheets, 1874.

[000's omitted in columns 9, 10, 11, and 14.]

7	8	9	10	11	12	13	14	15	
Number of Branches.	Number of Sub-Branches.	Average Liabilities to Public at each Office, ex-Subs.	Liabilities to Public.	Proprietors' Funds.	Ratio per Cent. of Proprietors' Funds to Liabilities to Public.	Ratio per Cent. of Uncalled Capital to Liabilities to Public.	Government Securities, Cash, &c.	Ratio per Cent. of Government Securities, Cash, &c., to Liabilities to Public.	Number.
No.	No.	£	£	£	Per cnt.	Per cnt.	£	Per cnt.	
134	3	178,	24,106,	2,171,	9·0	—	10,225,	42·4	1
148†		153,	22,852,	2,045,	8·9	—	7,596,	33·2	2
3	—	840,	3,319,	919,	27·7	—	1,016,	30·6	3
22	5	62,	1,432,	346,	24·1	83·8	229,	16·0	4
26	—	34,	917,	180,	19·6	72·5	261,	28·4	5
54	—	24,	1,329,	181,	13·6	11·3	562,	42·3	6
10	—	36,	393,	116,	29·4	132·0	55,	14·0	7
397	8	—	54,348,	5,958,	—	—	19,944,	—	
57	—	1,346,	777,0,	851,	10·9	—	—	36·7	

† Includes sub-branches.

Note.—For Table XXVI, see p. 41.

TABLE XXVII.—*Purely Provincial English Joint Stock*

[000's omitted, thus 260, = 260,000*l.*,

Number.	Purely Provincial Banks. [Banks of Issue are in *Italics.*]	1 When Established.	2 Date of Balance, 1874.	3 Subscribed Capital.	4 Uncalled Capital.	5 Liabilities. Paid-up Capital.	6 Reserve, including Balance of Profit Carried Forward.
	I. Cumberland and Northumberland.						
1	*Carlisle and Cumberland Bank*	1836	Dec.	300,	225,	75,	104,
2	*Cumberland Union B. Co., Limtd.*	'29	"	540,	315,	225,	83,
3	*Carlisle City and District Bank*....	'37	"	160,	80,	80,	91,
4	*Bank of Whitehaven, Limited*	'37	"	222,	123,	99,	91,
5	North Eastern B. Co., *Limited*	'72	"	800,	540,	260,*	81,
	II. Liverpool.						
6	Adelphi Bank, *Limited*	1861	Dec.	260,	130,	130,	5,
7	Liverpool Commercial B. Co., *Lim.*	'32	"	700,	350,	350,	204,
8	" Union Bank	'35	"	600,	None	600,	164,
9	National Bank of Liverpool, *Lim.*	'63	"	750,	300,	450,	93,
10	North Western Bank, *Limited*	'64	"	1,080,	675,	405,	101,
11	*North and South Wales Bank*	1836	Dec.	420,	36,	384,	212,
	III. Manchester District.						
12	Manchester and Liverpool District Banking Company	'29	"	1,810,	905,	905,	572,
13	Manchester and County B., *Limd.*	'62	"	4,400,	3,740,	660,	350,
14	Union B. of Manchester, *Limited.*	'36	June	947,	531,	417,	123,
15	Lancashire and Yorkshire B., *Lim.*	'72	Dec.	500,	250,	250,	34,
16	Manchester Joint Stock B., *Limd.*	1873	Dec.	288,	202,	86,	18,
17	Parr's Banking Company, *Limited*	'65	"	1,450,	1,160,	290,	86,
	IV. Yorkshire.						
18	*Swaledale and Wensleydale B. Co.*	'36	"	840,	777,	63,	33,
19	*Bradford Banking Company*	'27	"	1,020,	612,	408,	265,
20	" *Commercial J. Stock B.*	'33	"	968,	774,	194,	163,
21	" District Bank, *Limited*	'62	"	650,	422,	227,	112,
22	" Old Bank, *Limited*	'64	"	983,	590,	393,	137,
23	Bank of Leeds, *Limited*	'64	"	605,	454,	151,	42,
24	*Halifax Commercial B. Co., Lim.*	'36	June	240,	120,	120,	70,
25	*Yorkshire Banking Company*........	'43	Dec.	500,	250,	250,	148,
26	*Sheffield Banking Company* .... CAPITAL. 1,500 shares at 200*l.* = 300,000*l.* 2,376 " 50*l.* = 118,800*l.*	'31	"	419,	126,	293,	106,

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* Of the capital of this bank 20,000*l.* is in deferred shares given in payment of the preliminary

† Bills rediscounted, 131,600*l.*; credits, drafts, &c., 97,900*l.*; total, 229,500*l.*

Banks. *Balance Sheets of Forty-Nine Banks*, 1874.

except in Col. 15.]

7	8	9	10	11	12	13	14	15	
Liabilities.				Assets.					
Money Lodged, including Dividend due.	Circulation of Notes.	Acceptances.	Total Resources.	Bills and Advances.	Government and other Securities.	Cash, &c.	Property Account.	Authorised Issue.	Number.
								£	
617,	22,	—	818,	—	808,	—	9,	25,610	1
1,826,	35,	—	2,168,	1,634,	75,	413,	47,	35,395	2
658,	20,	—	850,	—	845,	—	5,	19,972	3
597,	27,	—	813,	715,	41,	49,	8,	32,681	4
314,	—	5,	659,	557,	56,	32,	13,	—	5
189,	—	—	324,	268,	—	34,	22,	—	6
1,227,	—	—	1,781,	1,540,	—	91,	150,	—	7
2,571,	—	774,	4,109,	2,947,	—	1,126,	36,	—	8
621,	—	40,	1,204,	1,071,	—	108,	25,	—	9
1,125,	—	230,†	1,860,	1,686,	—	141,	33,	—	10
3,891,	62,	59,	4,607,	3,289,	1,233,		85,	63,951	11
12,445,	—	150,	14,071,	9,645,	1,415,	2,860,	151,	—	12
5,794,	—	—	6,804,	—	6,766,	—	38,	—	13
1,588,	—	67,	2,195,	1,930,	232,		33,	—	14
626,	—	—	909,	754,	—	152,	3,	—	15
241,	—	—	346,	—	344,	—	2,	—	16
2,904,	—	—	3,280,	1,848,	101,	1,300,	30,	—	17
747,	49,	—	892,	658,	234,		—	54,372	18
2,071,	49,	—	2,792,	—	2,787,	—	5,	49,292	19
570,	20,	—	947,	—	937,	—	9,	20,084	20
716,	—	—	1,055,	—	1,035,	—	20,	—	21
1,165,	—	—	1,695,	—	1,675,	—	20,	—	22
423,‡	—	—	616,	577,	—	32,	7,	—	23
388,	11,	—	590,	—	585,	—	4,	13,733	24
2,444,	112,	—	2,954,	—	2,886,	—	68,	122,532	25
1,456,	37,	—	1,893,	—	1,870,	—	23,	35,843	26

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expenses, the amount of which appears among the assets included in the item "bills and advances."

‡ Including acceptances.

TABLE XXVII.—*Purely Provincial English Joint Stock*

[000's omitted, thus

Number.	Purely Provincial Banks. [Banks of Issue are in *Italics*.]	1 When-Established.	2 Date of Balance, 1874.	3 Subscribed Capital.	4 Uncalled Capital.	5 Liabilities. Paid-up Capital.	6 Liabilities. Reserve including Balance of Profit Carried Forward.
27	*Sheffield and Hallamshire Bank*	1836	June	733,	550,	183,	55,
28	" *Rotherham Bank* ...	'36	Dec.	502,	341,	161,	86,
29	Sheffield Union Banking Company	'43	June	287,	115,	172,	47,
	V. Derby, Notts, Lincoln, Leicester.						
30	*Burton, Uttoxeter, &c., Union B.*	1839	Dec.	260,	130,	130,	69,
31	Nottingham Joint Stock B., *Limd.*	'65	"	477,	382,	95,	32,
32	*Stamford, Spalding, and Boston Banking Company*..................	'32	"	200,	None	200,	103,
33	*Leicestershire Banking Company*	'29	"	500,	250,	250,	90,
	VI. Black Country.						
34	Staffordshire Joint Stock B., *Lim.*	1864	Dec.	872,	698,	174,	60,
35	*County of Stafford Bank*	'36	"	120,	60,	60,	35,
36	Lloyd's Banking Company, *Limited*	'65	"	2,181,	1,832,	349,	129,
37	Birmingham Joint Stock B., *Lim.*	'61	"	2,039,	1,835,	204,	219,
38	" Banking Co., *Limited*	'66	June	1,549,	1,394,	155,	121,
39	" Town and District B.	'36	"	400,	240,	160,	61,
40	*Wolverhampton and Staffordshire Banking Company*	'32	Dec.	500,	400,	100,	41,
	VII. W. and S. Counties.						
41	*Stourbridge and Kidderminster Banking Company*..................	1834	June	250,	150,	100,	86,
42	*Worcester City and County Banking Company, Limited*	'40	"	1,000,	750,	250,	102,
43	Bucks and Oxon Union Bank, *Lim.*	'66	Dec.	400,	320,	80,	18,
44	*West of England and South Wales District Bank*	'34	"	1,000,	250,	750,	150,
45	Devon and Cornwall Banking Co.	'32	"	400,	272,	128,	87,
46	Three Towns Banking Co., *Limited*	'63	"	100,	50,	50,	1,
47	*Wilts and Dorset Banking Co.*	'35	"	375,	125,	250,	155,
48	Hampshire Banking Company	'34	"	750,	600,	150,	41,
49	North Kent Bank, *Limited*...........	'64	"	65,	43,	22,	2,
	Totals	—	—	36,413,	23,873,	11,940,	5,282,
	Averages	—	—	743,	487,	244,	108,

* Cash and brokers' bills.

Banks. Balance Sheets of Forty-Nine Banks—Contd.

733 = 733,000*l.*, except in Col. 15.]

7	8	9	10	11	12	13	14	15	
Liabilities.				Assets.					
Money Lodged, including Dividend due.	Circulation of Notes.	Acceptances.	Total Resources.	Bills and Advances.	Government and other Securities.	Cash, &c.	Property Account.	Authorised Issue.	Number.
								£	
549,	22,	—	809,	—	804,	—	5,	23,524	27
1,618,	53,	—	1,918,	—	1,904,	—	15,	52,496	28
438,	—	—	658,	—	653,	—	5,	—	29
1,206,	48,	—	1,453,	—	1,432,	—	21,	60,701	30
576,	—	—	704,	—	689,	—	15,	—	31
1,265,	46,	—	1,614,	965,	410,	210,*	28,	55,721	32
1,349,	63,	—	1,752,	1,237,	265,	233,	17,	86,060	33
685,	—	—	920,	796,	37,	80,	6,	—	34
412,	9,	—	516,	400,	40,	68,	8,	9,418	35
4,974,	—	—	5,452,	—	5,395,	—	56,	—	36
1,632,	—	—	2,054,	1,647,	224,	164,	18,	—	37
1,119,	—	—	1,395,	1,084,	55,	234,	22,	—	38
943,	—	—	1,164,	1,033,	48,	63,	19,	—	39
878,	16,	—	1,036,	1,001,		30,	4,	35,378	40
1,133,	49,	—	1,368,	1,036,	25,	279,	27,	56,830	41
1,023,	2,	—	1,377,	1,123,	54,	173,	27,	6,848	42
702,	—	—	800,	—	786,	—	13,	—	43
4,436,	79,	—	5,416,	4,406,	502,	418,	90,	83,535	44
1,699,	—	—	1,914,	—	1,914,		—	—	45
46,	—	—	97,	93,	—	4,	—	—	46
3,086,†	75,	—	3,567,	1,553,	1,572,	395,	46,	76,162	47
2,116,	—	—	2,306,	1,431,	311,	524,	40,	—	48
80,	—	—	104,	91,	—	11,	2,	—	49
79,175,	906,	1,325,	98,625,	—	—	—	—	—	
1,616,	—	—	2,013,	—	—	—	—	—	

† Includes acceptances.

TABLE XXVIII.—*Analysis of Balance Sheets of Forty-*

[00's omitted in Columns 2 and 4, thus 18,7 = 18,700*l.*;

Number.	Purely Provincial Banks. [Banks of Issue are in *Italics.*]	1 Ratio per Cent. of Reserve Fund to Paid-up Capital.	2 Net Profit, less Charges.	3 Ratio per Cent. per Annum of Net Profits to Total Resources.	4 Charges.	5 Ratio per Cent. of Charges to Net Profits.	6 Ratio per Cent. per Annum of Charges to Liabilities to Public.
	I. Cumberland and Northumberland.	Per cnt.	£	Per cnt.	£	Per cnt.	Per cnt.
1	*Carlisle and Cumberland Bank*	138	18,7	2·28	—	—	—
2	*Cumberland Union B. Co., Limtd.*	37	45,6	2·10	15,9	34·9	0·85
3	*Carlisle City and District Bank*....	113	21,3	2·50	—	—	—
4	*Bank of Whitehaven, Limited*	93	18,0	2·21	4,0	22·2	0·64
5	North Eastern B. Co., *Limited*	31	11,9	1·80	9,4	79·0	2·96
	II. Liverpool.						
6	Adelphi Bank, *Limited*	4	9,8	3·02	5,2	53·1	2·76
7	Liverpool Commercial B. Co., *Lim.*	58	43,7	2·45	—	—	—
8	,, Union Bank	27	89,3	2·17	—	—	—
9	National Bank of Liverpool, *Lim.*	20	35,4	2·94	—	—	—
10	North Western Bank, *Limited*	25	37,9	2·04	—	—	—
11	*North and South Wales Bank*	55	66,4	1·44	37,5	56·5	0·93
	III. Manchester District.						
12	Manchester and Liverpool District Banking Company	63	211,1	1·50	93,2	44·1	0·74
13	Manchester and County B., *Limd.*	53	129,4	1·90	37,1	28·7	0·64
14	Union B. of Manchester, *Limited*	30	63,8	2·90	22,3	34·9	1·35
15	Lancashire and Yorkshire B., *Lim.*	14	19,5	2·14	9,2	47·2	1·47
16	Manchester Joint Stock B., *Limd.*	21	10,1	2·92	5,2	51·5	2·15
17	Parr's Banking Company, *Limited*	29	68,6	2·09	22,5	32·8	0·77
	IV. Yorkshire.						
18	*Swaledale and Wensleydale B. Co.*	52	15,9	1·78	4,4	27·7	0·55
19	*Bradford Banking Company*	65	72,3	2·51	—	—	—
20	,, *Commercial J. Stock B.*	84	40,0	4·22	—	—	—
21	Bradford District Bank, *Limited*	50	32,5	3·08	7,3	22·5	1·02
22	,, Old Bank, *Limited*	35	55,1	3·25	—	—	—
23	Bank of Leeds, *Limited*	28	14,0	2·27	3,2	22·8	0·76
24	*Halifax Commercial B. Co., Lim.*	59	17,1	2·92	—	—	—
25	*Yorkshire Banking Company*	59	90,2	3·05	—	—	—
26	*Sheffield Banking Company* .... CAPITAL. 1,500 shares at 200*l.* = 300,000*l.* 2,376 ,, 50*l.* = 118,000*l.*	36	52,5	2·77	—	—	—
27	*Sheffield and Hallamshire Bank*	30	27,9	3·44	—	—	—
28	,, *Rotherham Bank*	53	31,4	1·63	—	—	—
29	Sheffield Union Banking Company	28	21,9	3·33	—	—	—

Nine Purely Provincial English Joint Stock Banks, 1874.

000's omitted in Cols. 9, 10, 11, and 14.]

7 Number of Branches.	8 Number of Sub-Branches.	9 Average Liabilities to Public at each Office, ex Subs.	10 Liabilities to Public.	11 Proprietors' Funds.	12 Ratio per Cent. of Proprietors' Funds to Liabilities to Public.	13 Ratio per Cent. of Uncalled Capital to Liabilities to Public.	14 Government Securities, Cash, &c.	15 Ratio per Cent. of Government Securities, Cash, &c., to Liabilities to Public.	Number.
No.	No.	£	£	£	Per cnt.	Per cnt.	£	Per cnt.	
5	—	106,	639,	179,	28·0	—	—	—	1
13	4	133,	1,860,	308,	16·6	16·9	488,	26·2	2
4	—	136,	678,	171,	25·2	—	—	—	3
3	—	156,	623,	190,	30·5	19·8	89,	14·4	4
14	2	21,	318,	341,	107·3	17·0	89,	27·9	5
1	—	94,	189,	135,	71·7	68·9	33,	17·8	6
—	—	1,227,	1,227,	554,	45·1	28·5	91,	7·4	7
—	—	3,345,	3,345,	764,	22·8	—	1,126,	33·7	8
2	—	220,	661,	543,	82·0	45·4	108,	16·3	9
—	—	1,354,	1,354,	506,	37·4	49·9	141,	10·4	10
27	9	143,	4,011,	596,	14·8	—	1,233,	30·7	11
41	10	300,	12,594,	1,477,	11·7	—	4,275,	33·9	12
17	9	322,	5,794,	1,010,	17·4	64·6	—	—	13
14	6	110,	1,655,	540,	32·6	32·1	232,	14·0	14
6	2	89,	626,	284,	45·3	40·0	152,	24·4	15
1	—	121,	241,	104,	43·3	83·5	—	—	16
9	7	290,	2,904,	376,	12·9	39·9	1,401,	48·2	17
3	—	199,	796,	96,	12·1	—	234,	29·4	18
—	—	2,120,	2,120,	673,	31·7	—	—	—	19
—	—	590,	590,	357,	60·5	—	—	—	20
1	—	358,	716,	339,	47·4	59·0	—	—	21
2	—	388,	1,165,	530,	45·5	50·6	—	—	22
—	—	423,	423,	194,	45·8	107·4	32,	7·7	23
1	—	200,	399,	190,	47·7	30·1	—	—	24
14	7	170,	2,556,	398,	15·5	—	—	—	25
3	—	373,	1,493,	400,	26·8	—	—	—	26
—	—	571,	571,	238,	41·8	—	—	—	27
4	—	334,	1,671,	247,	14·8	—	—	—	28
2	1	146,	438,	220,	50·2	—	—	—	29

Table XXVIII.—*Analysis of Balance Sheets of Forty-Nine*

[00's omitted in cols. 2 and 4, thus 27,5 = 27,500*l.*

Number.	Purely Provincial Banks. [Banks of Issue are in *Italics*.]	1 Ratio per Cent. of Reserve Fund to Paid-up Capital.	2 Net Profit, less Charges.	3 Ratio per Cent. per Annum of Net Profits to Total Resources.	4 Charges or Working Expenses.	5 Ratio per Cent. of Charges to Net Profits.	6 Ratio per Cent. per Annum of Charges to Liabilities to Public.
			£		£		
	V. Derby, Notts, &c.						
30	*Burton, Uttoxeter, &c., Union B.*	53	27,5	1·89	—	—	—
31	Nottingham Joint Stock B., *Limd.*	34	10,7	1·52	5,2	48·6	0·90
32	*Stamford, Spalding, and Boston Banking Company*	51	32,4	2·01	—	—	—
33	*Leicestershire Banking Company*	36	37,3	2·13	—	—	—
	VI. Black Country.						
34	Staffordshire Joint Stock B., *Lim.*	35	21,1	2·29	—	—	—
35	*County of Stafford Bank*	58	12,3	2·38	—	—	—
36	Lloyd's Banking Company, *Limited*	37	88,1	1·61	—	—	—
37	Birmingham Joint Stock B., *Lim.*	107	48,7	2·37	—	—	—
38	,, Banking Co., *Limited*	78	30,8	2·21	—	—	—
39	,, Town and District B.	38	30,5	2·62	—	—	—
40	*Wolverhampton and Staffordshire Banking Company*	41	15,5	1·49	—	—	—
	VII. W. and S. Counties.						
41	*Stourbridge and Kidderminster Banking Company*	86	29,5	2·16	—	—	—
42	*Worcester City and County Banking Company, Limited*	41	33,3	2·42	18,5	55·5	1·80
43	Bucks and Oxon Union B., *Lim.*	23	18,1	2·26	—	—	—
44	*West of England and South Wales District Bank*	20	126,2	2·33	56,7	44·9	1·25
45	Devon and Cornwall Banking Co.	68	27,8	1·45	—	—	—
46	Three Towns Banking Co., *Limited*	2	2,6	2·67	1,6	61·5	3·45
47	*Wilts and Dorset Banking Co.*	62	55,3	1·55	33,4	60·4	1·06
48	Hampshire Banking Company	27	33,3	1·44	26,5	79·6	1·25
49	North Kent Bank, *Limited*	7	1,9	1·82	—	—	—
	Totals	—	2,046,2,	—	418,3	—	—
	Averages	44	42,1,	2·07	8,5	20 banks 42·7	20 banks 0·95

Purely Provincial English Joint Stock Banks—Contd.

000's omitted in Cols. 9, 10, 11, and 14.]

7 Number of Branches.	8 Number of Sub-Branches.	9 Average Liabilities to Public at each Office, ex-Subs.	10 Liabilities to Public.	11 Proprietors' Funds.	12 Ratio per Cent. of Proprietors' Funds to Liabilities to Public.	13 Ratio per Cent. of Uncalled Capital to Liabilities to Public.	14 Government Securities, Cash, &c.	15 Ratio per Cent. of Government Securities, Cash, &c., to Liabilities to Public.	Number
		£	£	£			£		
2	—	418,	1,254,	199,	15·9	—	—	—	30
5	—	96,	576,	128,	22·2	66·3	—	—	31
9	9	131,	1,311,	303,	23·1	—	621,	47·3	32
8	2	157,	1,412,	340,	24·1	—	498,	35·3	33
7	—	86,	685,	235,	34·3	101·9	117,	17·1	34
—	—	421,	421,	95,	22·5	—	108,	25·8	35
23	12	207,	4,974,	478,	9·6	36·8	—	—	36
2	—	544,	1,632,	423,	25·9	112·5	381,	23·8	37
1	—	559,	1,119,	276,	24·7	124·6	289,	25·8	38
7	—	118,	943,	221,	23·4	—	111,	11·7	39
—	—	894,	894,	141,	15·8	—	—	—	40
12	1	98,	1,182,	186,	15·8	—	304,	25·7	41
9	4	102,	1,025,	352,	34·3	73·2	227,	22·1	42
8	—	78,	702,	98,	14·0	45·6	—	—	43
38	4	116,	4,515,	900,	19·9	—	919,	20·4	44
14	—	113,	1,699,	215,	12·6	—	—	—	45
—	—	46,	46,	51,	109·9	108·0	4,	9·3	46
41	8	75,	3,161,	405,	12·8	—	1,967,	62·2	47
29	—	70,	2,116,	191,	9·0	—	835,	39·5	48
1	—	40,	80,	24,	29·9	53·7	11,	13·7	49
403	97	—	81,404,	17,221,	—	— 25 banks	16,126, 29 banks	— 29 banks	
8	—	180,	1,661,	351,	21·15	55·5	—	30·9	

TABLE XXIX.—*Profits, Dividends, and Prices of Forty-Nine Purely Provincial English Joint Stock Banks*, 1874.

Number.	Purely Provincial Banks. [Banks of Issue are in *Italics*.]	1 Ratio per Cent. of Net Profit to Paid-up Capital.	2 Dividend per Cent. per Annum, including Bonus.	3 Amount per Share Paid.	4 Market Price, January, 1875.	5 Premium per Cent.	6 Yield per Cent. at Price.		
	I. Cumberland and Northumberland.						£	*s.*	*d.*
1	*Carlisle and Cumberland Bank*	25·0	22	5	19⅞	297½	5	10	8
2	*Cumberland Union B. Co., Limtd.*	20·3	18	12½	40	220	5	12	6
3	*Carlisle City and District Bank*....	26·6	20	12½	44	252	5	13	7
4	*Bank of Whitehaven, Limited*	18·3	20	10	38½	285	5	3	10
5	North Eastern Banking Co., *Lim.*	4·6	5⅕	6	6¾	12½	4	12	5
	II. Liverpool.								
6	Adelphi Bank, *Limited*	7·5	5	10	9	Dis.	5	11	1
7	Liverpool Commercial B. Co., *Lim.*	12·5	12½	10	18	80	6	18	10
8	,, Union Bank..................	14·9	10*	20	29	45	6	17	11
9	National Bank of Liverpool, *Lim.*	7·9	6⅔	15	16¼	8⅓	6	3	1
10	North Western Bank, *Limited*	9·4	7	7½	9¾	30	5	7	8
11	*North and South Wales Bank*	17·3	20	10	31	210	6	9	–
	III. Manchester District.								
12	Manchester and Liverpool District Banking Company	23·3	20	10	35½	255	5	12	8
13	Manchester and County B., *Lim.*	18·2	15	15	42	180	5	7	1
14	Union Bank of Manchester, *Lim.*	15·3	11⅓	11	21⅜	94⅓	5	16	7
15	Lancashire and Yorkshire B., *Lim.*	7·8	6	10	13½	35	4	8	10
16	Manchester Joint Stock B., *Limd.*	6·0	10	6	11¼	87½	5	6	8
17	Parr's Banking Company, *Limited*	23·7	15	20	52½	162½	5	14	3
	IV. Yorkshire.								
18	*Swaledale and Wensleydale B. Co.*	25·2	20	7½	—	—	—		
19	*Bradford Banking Company*	17·7	25	40	154	285	6	9	10
20	,, *Commercial J. Stock B.*	20·7	18	20	58½	192½	6	3	1
21	,, District Bank, *Limited*	14·3	10½	35	71½	104 2/7	5	2	10
22	,, Old Bank, *Limited*........	14·0	13¾	20	50	150	5	10	–
23	Bank of Leeds, *Limited*	9·3	7	25	31¾	27	5	10	3
24	*Halifax Commercial B. Co., Lim.*	14·3	14	10	23⅞	138⅞	5	17	3
25	*Yorkshire Banking Company*.......	36·1	24	12½	50	300	6	–	–
26	*Sheffield Banking Company*	18·0	17	140	274	95 5/7	8	13	8
27	,, *and Hallamshire Bank*	15·2	15	25	49¾	99	7	10	9
28	,, *Rotherham Bank*	19·5	18¾	32	83½	161	7	3	8
29	Sheffield Union Banking Company	12·7	12½	12	21	75	7	2	10

* 2*l*. 10*s*. per share = 75,000*l*. capitalised from surplus funds and profits.

TABLE XXIX.—*Profits, Dividends, and Prices of Forty-Nine Purely Provincial English Joint Stock Banks—Contd.*

Number.	Purely Provincial Banks. [Banks of Issue are in *Italics*.]	1 Ratio per Cent. of Net Profit to Paid-up Capital.	2 Dividend per Cent. per Annum including Bonus.	3 Amount per Share Paid.	4 Market Price, January, 1875.	5 Premium per Cent.	6 Yield per Cent. at Price.		
	V. Derby, Notts, &c.						£	s.	d.
30	*Burton, Uttoxeter, &c., Union B.*	21·1	20	10	27	170	7	8	2
31	Nottingham Joint Stock B., *Lim.*	11·2	8½	10	15	50	5	13	4
32	*Stamford, Spalding, and Boston Banking Company*	16·2	17	20	67¼	236¼	5	1	1
33	*Leicestershire Banking Company*	15·0	13¾	40 5	90 15½	125 210	6 4	2 8	2 8
	VI. Black Country.								
34	Staffordshire Joint Stock B., *Lim.*	12·1	8¾	20	28¼	41¼	6	3	11
35	*County of Stafford Bank*	20·5	18	5	16	220	5	12	6
36	Lloyd's Banking Company, *Limited*	25·3	20*	8	29	262½	5	10	4
37	Birmingham Joint Stock B., *Lim.*	23·9	20	10	34	240	5	17	7
38	„ Banking Co., *Limited*	19·9	13¾	5	15	200	4	11	8
39	„ Town and District B.	19·1	11¼	8	16¼	103⅛	5	10	8
40	*Wolverhptn. and Staffdsh. B. Co.*	15·5	10	10	18	80	5	11	1
	VII. W. and S. Counties.								
41	*Stourbridge and Kidderminster*	29·5	20	10	25	150	8	–	–
42	*Worcester City and County Banking Company, Limited*	13·3	12⅖	12½	25¼	102	6	2	9
43	Bucks and Oxon Union B., *Lim.*	22·6	20	5	17½	250	5	14	3
44	*W. of Engl. and S. Wales Dist. B.*	16·8	14	15	33½	123⅓	6	5	4
45	Devon and Cornwall Banking Co.	21·7	16½	32	75	134⅜	7	–	9
46	Three Towns Banking Co., *Limited*	5·2	5	25	18	Dis.	—		
47	*Wilts and Dorset Banking Co.*	22·1	22	10	40	300	5	10	–
48	Hampshire Banking Company	22·2	13	10	23	130	5	13	–
49	North Kent Bank, *Limited*	8·5	8	10	par	—	—		
	Totals	—		—	—				
	Averages	17·1	14½	—	—	45 banks 151	46 banks 5	19	6

* Profits equal to 6⅔ per cent. on old capital capitalised.

TABLE XXX.—*Scotch Joint Stock Bank Balance*

[000's omitted,

Number.	Banks. [All are Banks of Issue.]	1 When Established.	2 Date.	3 Subscribed Capital.	4 Uncalled Capital.	5 Liabilities.	6
						Paid-up Capital.	Reserve, including Balance of Profit Carried Forward.
1	Bank of Scotland	1695	Feb. 1874 „ '75	Stock „	500, „	1,000, „	371, 401,
2	Royal Bank of Scotland	1727	Sept. 1873 „ '74	„ „	Nil „	2,000, „	509, 521,
3	British Linen Company Bank	1746	Apr. 1873 „ '74	„ „	Nil „	1,000, „	361, 390,
4	Commercial Bank of Scotland	1810	Oct. 1873 „ '74	„ „	Nil „	1,000, „	394, 407,
5	National Bank of Scotland	1825	Nov. 1873 Oct. '74	„ „	Nil „	1,000, „	394, 418,
6	Union Bank of Scotland	1830	Apr. 1873 „ '74	„ „	Nil „	1,000, „	389, 403,
7	Clydesdale Banking Company	1838	Dec. 1873 „ '74	„ „	Nil „	900, 1,000,	353, 519,
8	City of Glasgow Bank	1839	June 1873 „ '74	„ „	Nil „	870, 1,000,	313, 451,
9	Aberdeen Town and County Banking Company	1825	Jan. 1874 „ '75	720, „	468, „	252, „	116, 118,
10	North of Scotland Banking Company	1836	Sept. 1873 „ '74	1,600, „	1,280, „	320, „	85, 100,
11	Caledonian Banking Company	1838	June 1873 „ '74	500, „	450, „	125, „	63, 63,
	Totals	— —	— —	— —	— —	9,467, 9,697,	3,349, 3,792,
	Averages	— —	— —	— —	— —	861, 882,	304, 345,

[1] (1873-74) including balances due by other banks,
[2] ('73) viz., on open accounts, 1,373,300*l.*, bills
[3] ('73-74) including property account.
[4] ('73-74) including cash in hands of London agents
[5] ('73) heritable property yielding rent 61,400*l.*, bank
[6] ('73-74) drafts and acceptances.
[7] ('73) viz., on open accounts 2,305,100*l.*, bills
[8] ('73-74) also Bank of Mona has 40,000*l.* under

Sheets for the Years 1873 *and* 1874.
thus 252 = 252,000*l.*]

7	8	9	10	11	12	13	14	15	
Liabilities.				Assets.					
Money Lodged.	Notes in Circulation.	Acceptances.	Total Resources.	Bills and Advances.	Government and other Securities.	Cash, &c.	Property Account.	Authorised Issue.	Number.
10,486,	628,	2,060,	14,545,	10,175,	3,830,[4]	346,	194,	343,	1
10,881,	627,	1,443,	14,352,	10,208,	3,522,	426,	196,	,,	
10,597,	842,	378,	14,326,	9,987,	3,248,[1]	940,	151,	216,	2
10,546,	865,	423,	14,355,	10,431,	2,800,	951,	172,	,,	
8,118,	610,	332,	10,421,	7,086,[7]	2,706,[4]	502,	126,	438,	3
7,957,	676,	329,	10,352,	7,493,	2,222,	513,	124,	,,	
9,358,	1,024,	473,[6]	12,250,	8,383,	2,796,[4]	937,	133,	375,	4
9,588,	785,	433,	12,213,	8,585,	2,878,	606,	143,	,,	
10,480,	588,	1,356,[6]	13,918,	9,901,	3,417,[1]	476,	123,	297,	5
11,034,	588,	1,224,	14,265,	10,515,	3,150,	475,	124,	,,	
9,874,	947,	305,	12,515,	9,030,	2,694,	638,	152,	454,	6
9,965,	776,	219,	12,364,	8,645,	2,977,[9]	586,	155,	,,	
6,776,	732,	275,	9,035,	6,319,[2]	1,597,[9]	952,[1]	168,[5]	274,	7
6,859,	717,	256,	9,351,	6,472,	1,705,	1,006,	168,	,,	
7,998,	896,	929,	11,007,	7,955,[3]	2,059,[1]	993,	See Bills and Advances.	73,[8]	8
8,489,	898,	793,	11,631,	8,798,	1,877,	957,	—	,,	
1,640,	172,	—	2,180,	1,460,	418,	270,[1]	33,	70,	9
1,848,	193,	—	2,410,	1,880,	251,	240,	39,	,,	
2,204,	340,	—	2,949,	2,109,	516,	291,[1]	33,	154,	10
2,479,	397,	—	3,296,	2,334,	564,	357,	40,	,,	
942,	97,	—	1,227,	813,	266,	125,[1]	23,	53,	11
1,053,	113,	—	1,354,	897,	248,	184,	26,	,,	
78,572,	6,877,	6,109,	104,374,	73,217,	23,548,	6,470,	1,137,	2,749,	
80,699,	6,635,	5,120,	105,943,	76,258,	22,195,	6,301,	1,187,	2,749,	
		8 Banks.							
7,143,	625,	764,	9,489,	6,656,	2,141,	588,	—	250,	
7,336,	603,	640,	9,631,	6,933,	2,018,	573,	—	250,	

and cash in London.
4,945,500*l.*; (1874) on open accounts, 1,904,200*l.*, bills 4,567,400*l.*

and short loans.
buildings 106,400*l.*; (1874) heritable property yielding rent 62,400*l.*, bank buildings 106,000*l.*

4,781,100*l.*; (1874) on open accounts, 2,784,100*l.*, bills 4,708,700*l.*
Manx Acts. (1873-74) including short loans in London.

TABLE XXXI.—*Analysis of Scotch Joint Stock Bank*

[000's omitted in

Number.	Banks.	1 Ratio per Cent. of Reserve Fund to Paid-up Capital.	2 Net Profits, (Less Charges). [00's omitted.]	3 Rate per Cent. per Annum of Net Profits to Total Resources.	4 Number of Branches.	5 Average Liabilities to Public at each Office.	6 Liabilities to Public.	7 Proprietors' Funds.
		Per cnt.	£	Per cnt.	No.	£	£	£
1	Bank of Scotland	37·1	165,2	1·14	76	171,	13,174,	1,371,
		40·1	175,6	1·22	,,	168,	12,951,	1,401,
2	Royal Bank of Scotland	25·4	199,3	1·39	100	117,	11,818,	2,509,
		26·0	202,2	1·41	106	111,	11,834,	2,521,
3	British Linen Company Bank	36·1	134,2	1·29	61	146,	9,060,	1,361,
		39·0	163,4	1·58	67	132,	8,962,	1,390,
4	Commercial Bank of Scotland	39·4	165,8	1·35	96	112,	10,855,	1,394,
		40·7	168,2	1·39	100	107,	10,805,	1,407,
5	National Bank of Scotland	39·4	199,0	1·43	87	142,	12,524,	1,394,
		41·8	184,6	1·29	91	140,	12,847,	1,418,
6	Union Bank of Scotland	38·9	160,1	1·28	116	95,	11,126,	1,389,
		40·3	161,5	1·30	,,	94,	10,960,	1,403,
7	Clydesdale Banking Company	39·2	153,7	1·70	76	101,	7,783,	1,253,
		51·9	146,1	1·56	79	98,	7,832,	1,519,
8	City of Glasgow Bank	36·0	114,7	1·04	122	80,	9,824,	1,183,
		45·1	129,8	1·12	,,	83,	10,181,	1,450,
9	Aberdeen Town and County Banking Co.	46·0	32,9*	1·51	38	46,	1,812,	368,
		46·8	34,3	1·42	,,	52,	2,041,	370,
10	North of Scotland Banking Company	26·6	40,2	1·36	44	56,	2,544,	405,
		31·2	45,2	1·37	46	61,	2,875,	420,
11	Caledonian Banking Company	50·4	18,7	1·52	19	52,	1,039,	188,
		50·4	18,7	1·38	21	53,	1,166,	189,
	Totals 1873	—	1,383,8	—	835	—	91,558,	12,816,
	Totals '74	—	1,429,6	—	862	—	92,453,	13,489,
	Averages 1873	34·4	125,8	1·33	76	108,	8,323,	1,165,
	Averages '74	39·1	129,9	1·35	78	106,	8,405,	1,226,

* (1873) including 3,100*l.* "extra or casual profits

† ('74) also 25,000*l.*, or 2½ per cent. distributed

Balance Sheets for the Years 1873 *and* 1874.

Cols. 5, 6, 7, and 10.]

8	9	10	11	12	13	14	15	16	17	
					Profits, Dividends, and Prices.					
Ratio per Cent. of Proprietors' Funds to Liabilities to the Public.	Ratio per Cent. of Uncalled Capital to Liabilities to Public.	Government Securities, Cash, &c.	Ratio per Cent. of Government Securities, Cash, &c., to Liabilities to Public.	Ratio per Cent. of Net Profit to Paid-up Capital.	Dividend per Cent. per Annum including Bonus.	Amount per Share Paid.	Market Price, Jan., 1874 and 1875.	Premium per Cent.	Yield per Cent. at Market Price.	Number.
Per cnt.	Per cnt.	£	Per cnt.	Per cnt.	Per cnt.			Per cnt.	£ s. d.	
10·4	3·86	4,176,	31·7	16·52	13½	Stock	292	192	4 12 6	1
10·8	,,	3,948,	30·5	17·56	14	,,	315	215	4 8 11	
21·2	Nil	4,188,	35·4	9·96	9	Stock	198½	98½	4 10 8	2
21·3	,,	3,752,	31·7	10·11	9½	,,	230½	130½	4 2 5	
15·0	Nil	3,209,	35·4	13·42	13	Stock	275	175	4 14 6	3
15·5	,,	2,735,	30·5	16·34	,,	,,	286½	186½	4 10 9	
12·8	Nil	3,733,	34·4	16·58	15	Stock	303	203	4 19 –	4
13·0	,,	3,484,	32·2	16·82	,,	,,	311	211	4 16 5	
11·1	Nil	3,894,	31·1	19·90	16	Stock	306	206	5 4 7	5
11·0	,,	3,626,	28·2	18·46	,,	,,	313	213	5 2 2	
12·5	Nil	3,332,	29·9	16·01	15	Stock	295	195	5 1 8	6
12·8	,,	3,563,	32·5	16·15	,,	,,	,,	,,	5 1 8	
16·1	Nil	2,549,	32·7	17·08	14	Stock	279	179	5 – 4	7
19·4	,,	2,711,	34·6	14·61	14†	,,	284	184	4 18 7	
12·1	Nil	3,052,	31·1	13·18	10	Stock	224	124	4 9 3	8
14·2	,,	2,833,	27·8	12·98	11	,,	236	136	4 13 3	
20·3	—	687,	37·9	13·06	12½	7	15⅜	119 9/14	5 13 10	9
18·1	22·9	491,	24·0	13·61	,,	,,	17¾	153½	4 18 7	
15·9	—	807,	31·7	12·56	10	4	9¾	143¾	4 2 –	10
14·6	44·5	922,	32·1	14·12	11¼	,,	10⅞	171⅞	4 2 9	
18·1	—	391,	37·6	14·96	14	2½	7½	200	4 13 4	11
16·2	38·6	431,	37·0	14·96	,,	,,	8	220	4 7 6	
—	—	30,019,	—	—	—	—	—	—	—	
—	—	28,497,	—	—	—	—	—	—	—	
14·0	—	—	32·8	14·62	12·91	—	—	167	4 16 6	
14·6	—	—	30·8	14·74	13·20	—	—	183	4 13 –	

during the year."

among the shareholders, being exceptional profit realised in sale of old bank premises.

TABLE XXXII.—*Irish Joint Stock Balance*

[000's omitted in Columns

Number.	Banks. [Issuing Banks in *Italics*.]	1 When Established.	2 Date of Balance.	3 Subscribed Capital.	4 Uncalled Capital.	5 Liabilities. Paid-up Capital.	6 Liabilities. Reserve, including Balance of Profit Carried Forward.
				£	£	£	£
1	Hibernian Bank	1825	Oct., 1873	2,000,	1,500,	500,	241,
		"	" '74	"	"	"	239,
2	Munster Bank, *Limited*	1864	Dec., 1873	1,000,	650,	350,	169,
		"	" '74	"	"	"	167,
3	*National Bank*	1835	Dec., 1873	2,500,	1,000,	1,500,	134,
		"	" '74	"	"	"	156,
4	Royal Bank of Ireland	1836	Aug., 1873	1,500,	1,200,	300,	200,
		"	" '74	"	"	"	201,
5	*Ulster Banking Company*	1836	Aug., 1873	1,000,	750,	250,	288,
		"	" '74	"	"	"	292,
	Totals	—	1873	8,000,	5,100,	2,900,	1,032,
	"	—	'74	8,000,	—	2,900,	1,055,

* (1873) bills 1,151,000*l.*, advances 809,400*l.*; (1874) bills 1,265,200*l.*, advances 891,700*l.*

‡ (1873) bills 1,350,500*l.*, advances 555,300*l.*;

TABLE XXXIII.—*Analysis of Balance Sheets of Irish*

[00's omitted in Cols. 2 and 4, thus 61,3 = 61,300.]

Number	Banks. [Issuing Banks in *Italics*.]	1 Ratio per Cent. of Reserve Fund to Paid-up Capital.	2 Net Profit, less Charges. [00's omitted.]	3 Ratio per Cent. per Annum of Net Profit to Total Resources.	4 Charges or Working Expenses. [00's omitted.]	5 Ratio per Cent. of Charges to Net Profits.	6 Ratio per Cent. per Annum of Charges to Liabilities to Public.
		Per cnt.	£	Per cnt.	£	Per cnt.	Per cnt.
1	Hibernian Bank	48	61,3	2·78	—	—	—
		48	58,3	2·42	30,9*	53·0	1·85
2	Munster Bank, *Limited*	48	44,5†	1·64	36,1	81·1	1·64
		48	43,8	1·47	40,4	92·2	1·64
3	*National Bank*	9	179,3	1·60	130,8	73·0	1·37
		10	187,1	1·62	134,8	72·0	1·36
4	Royal Bank of Ireland	67	53,0	2·29	20,5	38·7	1·13
		67	47,0	2·02	22,1	47·0	1·21
5	*Ulster Banking Company*	115	58,4	1·40	—	—	—
		117	53,6	1·26	—	—	—
	1873	—	396,5	—	—	—	—
	'74	—	389,8	—	—	—	—
						4 banks.	4 banks.
	Averages, 1873	36	—	1·75	—	—	—
	" '74	36	—	1·66	—	67·9	1·44

* Taken from returns to Committee on Banks of Issue.

Sheets for the Years 1873 *and* 1874.

headed £, thus 240, = 240,000*l*.

7	8	9	10	11	12	13	14	15	
Liabilities.				Assets.					
Money Lodged, including Dividend Due.	Notes in Circulation.	Acceptances.	Total Resources.	Bills and Advances.	Governmemt and other Securities.	Cash, &c.	Property Account.	Authorised Issue.	Number.
£	£	£	£	£	£	£	£	£	
1,462,	—	—	2,203,	1,960,*	195,	—	48,	None	1
1,669,	—	—	2,408,	2,157,	190,	—	62,	,,	
2,194,	—	—	2,713,	2,217,	200,	259,	37,	None	2
2,458,	—	—	2,975,	2,493,	175,	240,	66,	,,	
8,200,	1,312,	36,	11,181,	7,069,†	2,448,	1,419,	244,	852,	3
8,571,	1,344,	—	11,571,	7,095,	2,679,	1,549,	248,	,,	
1,813,	—	—	2,313,	1,906,‡	380,		27,	None	4
1,824,	—	—	2,325,	1,827,	468,		29,	,,	
3,025,	605,	—	4,168,	3,320,	311,	537,	—	311,	5
3,121,	589,	—	4,251,	3,292,	311,	648,	—	,,	
16,694,	1,917,	36,	22,578,	16,472,	5,749,		356,	1,163,	
17,643,	1,933,	—	23,530,	16,864,	6,261,		405,	1,163,	

† (1873) bills 4,697,100*l*., advances 2,372,300*l*.; (1874) bills 4,683,100*l*., advances 2,411,900*l*.
(1874) bills 1,419,700*l*., advances 407,100*l*.

Joint Stock Banks for the Years 1873 *and* 1874.

[000's omitted in Cols. 9, 10, 11, and 14, thus 64, = 64,000*l*.]

7	8	9	10	11	12	13	14	15	
Number of Branches.	Number of Sub-Branches.	Average Liabilities to Public at each Office, ex Subs.	Liabilities to Public.	Proprietors' Funds.	Ratio per Cent. of Proprietors' Funds to Liabilities to Public.	Ratio per Cent. of Uncalled Capital to Liabilities to Public.	Government Securities, Cash, &c.	Ratio per Cent. of Government Securities, Cash, &c., to Liabilities to Public.	Number.
No.	No.	£	£	£	Per cnt.	Per cnt.	£	Per cnt.	
22	3	64,	1,462,	741,	50·7	102·7	195,	13·3	1
27	4	60,	1,669,	739,	44·3	89·9	190,	11·4	
34	5	63,	2,194,	519,	23·6	29·6	459,	20·9	2
34	5	70,	2,458,	517,	21·1	26·4	416,	16·9	
83	29	114,	9,548,	1,634,	17·1	10·5	3,867,	40·5	3
83	29	118,	9,915,	1,656,	16·7	10·1	4,228,	42·6	
4	—	363,	1,813,	500,	27·6	66·2	380,	20·9	4
4	—	365,	1,824,	501,	27·4	66·3	468,	25·7	
40	—	88,	3,630,	538,	14·8	20·7	848,	23·4	5
43	—	84,	3,710,	542,	14·6	20·2	959,	25·8	
183	37	—	18,647,	3,932,	—	—	5,749,	—	
191	38	—	19,576,	3,955,	—	—	6,261,	—	
—	—	102,	3,729,	786,	21·1	27·2	—	30·8	
—	—	102,	3,915,	791,	20·2	26·0	—	32·0	

† (1873) also 75,000*l*., being premium on new issue.

Table XXXIV.—*Profits, Dividends, and Prices of Irish Joint Stock Banks for the Years* 1873 *and* 1874.

Number.	Banks. [Issuing Banks in *Italics*.]	1 Ratio per Cent. of Net Profits to Paid-up Capital.	2 Dividends and Prices. Dividend per Cent. per Annum, including Bonus.	3 Amount per Share Paid.	4 Market Price, January, 1874, and January, 1875.	5 Premium per Cent.	6 Yield per Cent. at Market Price.
		Per cnt.	Per cnt.	£	£	Per cnt.	£ s. d.
1	Hibernian Bank	12·0	12	25	57⅞	131½	5 3 8
		11·7	12	,,	60	140	5 – –
2	Munster Bank, *Limited*	12·7	12	3½	8⅞	153 4/7	4 14 7
		12·5	13	,,	9	157 1/7	5 1 1
3	*National Bank*	12·0	10	30	57⅜	91¼	5 4 7
		12·5	11	,,	67½	125	4 17 9
4	Royal Bank of Ireland	17·7	15	10	28¾	187½	5 4 4
		15·7	15	,,	30½	205	4 18 4
5	*Ulster Banking Company*	23·4	20	2½	10⅜	315	4 16 5
		21·4	20	,,	,,	,,	4 16 5
		—	—	—	—	—	—
		—	—	—	—	—	—
	Averages, 1873	13·7	13·8			176	5 – 8
	'74	13·4	14·2			188	4 18 9

Publication of Balance Sheets.

If a bank be sound in position and ably managed, I venture to think it has much to gain and nothing to lose by the regular publication of a clear statement of its assets and liabilities. The public surely have a right to know something of the position, and the extent and character of the business, of the banks to which they entrust their money. The opinion that a balance sheet gives confidence to the public, and thus tends to enhance the value of a bank's shares in the market, seems to be corroborated by a comparison of the yield per cent. to the investor of publishing and non-publishing banks as shown in Table III. The Whitehaven Joint Stock Bank, which does not, I believe, publish a balance sheet, yields the investor 5*l.* 17*s.* 2*d.* per cent., as against 5*l.* 4*s.* yielded on the average by the four other Cumberland banks of issue, which do publish balance sheets. The shares of the Bank of Liverpool with, it is understood, the largest business in Liverpool, but not publishing, stand to yield 7*l.* 19*s.* 2*d.* per cent., against 6*l.* 18*s.* and 6*l.* 18*s.* 10*d.* yielded respectively by the Liverpool Union Bank and the Liverpool Commercial Bank, which do publish; whilst still less is yielded by the other Liverpool banks which publish. The Manchester and Salford Bank, not publishing, yields to the investor 6*l.* 7*s.* 7*d.* per cent., against 5*l.* 11*s.* per cent. yielded on the average by the three other leading banks of Manchester. The Darlington District Bank, as compared with the banks of its district, which publish, seems also to be a case in point. Ten Yorkshire banks, which do not publish, yield on the average 6*l.* 10*s.* 6*d.* per cent.; thirteen, which do publish, yield on the average 6*l.* 1*s.* 1*d.* per cent. In Group V, midland counties, agricultural, eight non-publishing banks yield on the average 5*l.* 12*s.*, against 5*l.* 6*s.* 2*d.* per cent. yielded by five publishing banks. In addition to its other advantages the publication of a balance sheet is calculated to exercise an appreciable effect in preventing the management from straying far from the recognised lines of sound banking. The knowledge that the balance sheet must run the gauntlet of adverse criticism, may, without discredit, be admitted by directors and managers as an incentive to keeping advances within due limits, and maintaining ample reserves readily available for any emergency. I have never heard any valid argument against the publication of balance sheets. It is sometimes said that it holds out a temptation to competition; but how little there is in this objection becomes evident when it is considered that the success of banking can, irrespective of any balance sheet, be tested by the amount of the profits, the rate of dividend, and the market price of the shares, all of which are matters of publicity. It has been urged that the figures of a balance sheet afford little reliable information as to the real position of a bank; because although the assets may amount on paper to the totals stated under the various heads, half the bills may be rotten and half the loans irrecoverable. I must dissent strongly from this view. Balance sheets differ in the amount of information which they give, but they are issued with the imprimatur of the directors and of the auditor, who is generally a public accountant of standing, and the character of these gentlemen for business capacity, and even for veracity, is staked upon the correctness of the published accounts. This is no small safeguard to the public.

It is satisfactory to note that the practice of publishing balance sheets seems to gain ground. Table XXVII contains the balance sheets of forty-nine purely provincial English banks. For a similar table, which was prepared for 1870, and is printed in the appendix, the balances of not more than thirty-five purely provincial banks could be obtained. The Manchester and Liverpool District Banking Company, by far the largest joint stock bank out of London, published its balance sheet for the first time in the beginning of 1875; and we may hope that year by year the banks which practice concealment will rapidly become fewer in number.

A bank's liabilities consist of two chief sections. (1) Those to the proprietors, comprising the paid-up capital, the reserve-fund, and the balance of undivided profit; (2) Those to the public, comprising money lodged, drafts current, note circulation, and acceptances. These liabilities constitute the total resources. The mode of their employment is shown by the items of assets, which consist of:—(1) Bills and advances to customers; (2) Government and other securities and investments; (3) Cash on hand and at call; and, (4) Property account.

Although averse on general grounds to legislative interference with private enterprise, yet I would, in the interests of the public and in those of sound banking, advocate that all joint stock banks should be constrained by law to publish their balance sheets once a-year in a prescribed form, the chief features of which should be that (1) acceptances, (2) note circulation and (3) bills rediscounted, should be distinguished from one another and from (4) money lodged, and that on the other side of the account (1) bills, (2) advances on open accounts, (3) cash, (4) Government securities, and (5) other investments, should each be shown separately. The current expenses should also be stated.

I submit a form of balance sheet and relative account of profit and loss, which will serve as a key to the manner in which the various balance sheets have been summarised in the tables. As may be supposed, numerous difficulties have arisen in making these summaries, from diversities of practice on the part of the various banks in the classification of items. especially on the creditor side of the account.

TABLE XXXV.—*Pro forma General Balance Sheet*, 31*st December*, 1875.

Note.—The bracketed number opposite each principal item refers to the column in the tabularised summary in which it is included in Table XXVII.

LIABILITIES.

Dr.

TO THE PUBLIC.	£	£
Due on current and deposit accounts (7)	6,000,000	
Drafts current (7)	200,000	
Note circulation (8)	500,000	
Acceptances (9)	700,000	
Bills rediscounted or other endorsements current (7 or 9)	100,000	
Total to the public....		7,500,000
TO THE SHAREHOLDERS.		
Capital paid up, 50,000 shares at 20*l.* per share (5)	—	1,000,000
Reserve fund at last balance	480,000	
Now added	20,000	
(6)		500,000
		1,500,000
Balance of Profit—		
Dividend to be now paid at 10 per cent. per annum (7)	50,000	
Bonus of 5 per cent. (7)	50,000	
Balance carried forward (6)	10,000	
		110,000
		9,110,000

ASSETS.

Cr.

LENT TO CUSTOMERS.	£	£
Bills	3,500,000	
Advances on open account	2,210,000	
Acceptances as per contra	700,000	
Total lent to customers (11)	—	6,410,000
Bills rediscounted or other endorsements current as per contra (11)	—	100,000
CASH AND SURPLUS FUNDS.		
English Government Securities (12)	1,000,000	
Other first-class available investments (12)	750,000	
Cash on hand (13)	375,000	
Do. at call and short notice with Company's bankers, brokers' bills, &c. (13)	375,000	
Total cash and surplus funds	—	2,500,000
PROPERTY ACCOUNT.		
Bank premises and furniture (14)	—	100,000
		9,110,000

Pro forma Profit and Loss Account for the Year 1875.

	£	£
To current expenses, including directors' and auditors' fees, stationery, rent, taxes, and all other charges	—	75,000
To rebate of discount carried forward	—	20,000
To balance of profit for 12 months—		
Dividend paid for half year, to 30th June.	50,000	
Reserve fund as above....	20,000	
Balance of profit carried to general balance sheet	110,000	
		180,000
		275,000

	£
By balance brought forward 30th December, 1874	7,500
By gross profits for twelve months, including rebate from previous year, and after providing amply for bad and doubtful debts	267,500
	275,000

Some banks publish twice a-year, some only once. It is, I think, scarcely prudent for any but very large banks to publish their accounts more frequently than once a-year. Six months seems too short a time to bring the results of a moderately-sized business regularly within the law of average.

III. Analysis of Liabilities.

Beginning with the debtor side of the balance sheet, I shall discuss *seriatim* the various items of the liabilities.

Ratio of Uncalled Capital to Liabilities to Public.

The ratio per cent. of the uncalled capital to the liabilities to the public is found to be as under:—

	Per Cent.
Purely London—	
4 senior banks, unlimited, average	18·7
Lowest—City Bank	9·1
Highest—London and Westminster	25·6
3 other banks, limited, average	44·7
Lowest—Central	13·0
Highest—Imperial	49·0
London and provincial—	
2 senior banks, unlimited, average	8·8
Lowest—National Provincial Bank	7·2
Highest—London and County	10·5
5 other banks, limited, average	50·3
Lowest—The London and Provincial Bank	11·3
Highest—London and Yorkshire	132·0
Purely provincial—	
24 unlimited (I have not thought it worth while to work them out)	—
25 limited, average	55·5
Lowest—Cumberland Union	16·9
Highest—Birmingham Banking Company	124·6

Proprietors' Funds and their Ratio to Liabilities to Public.

The proprietors' funds, consisting of (1) the paid-up capital, (2) the reserve fund, (3) the balance of undivided profit carried forward, form together the working capital of the bank, the basis upon which its business rests, and it is of much importance to ascertain the proportion which this basis bears to the superstructure of credit which is reared upon it. This is found to be as follows.

Ratio of proprietors' funds to liabilities to public:—

	Per Cent.	
Purely London—		
4 senior banks	9·5	
3 other ,,	29·3	
Average	——	11·0
London and provincial—		
2 senior banks	9·0	
5 other ,,	23·4	
Average	——	10·9
49 Purely Provincial, average		21·0
22 banks of issue	21·0	
21 banks of non-issue	20·0	
5 ,, exceptional omitted		
11 Scotch		14·6
4 Irish		20·2

Various considerations combine to determine the amount of proprietors' funds which should form the basis of the business of a bank.

Banks of recent establishment, not having had time to acquire business in relation to their paid-up capital, will naturally show a large proportion of proprietors' funds to liabilities to the public. Such are:—

Limited Banks.	Established.	Ratio of Proprietors' Funds to Liabilities to Public.
		Per cnt.
North-Eastern Bank	1872	107·3
Lancashire and Yorkshire	'72	45·4
Manchester Joint Stock	'73	43·3
London and Yorkshire	'72	29·4

Small banks may be said to require a larger proportion of proprietors' funds than large banks.

TABLE XXXVI.—*England and Wales. London and Provincial and Purely Provincial Joint Stock Banks. Ratio of Proprietors' Funds to Liabilities to Public. Small Banks, Medium-sized Banks, and Large Banks.*

[000's omitted in Columns headed £.]

Locality.	Small Banks. Liabilities to Public under 1,000,000*l*.				Medium-sized Banks. Liabilities to Public 1,000,000*l*. to 2,000,000*l*.			
	Number of Banks.	Liabilities to Public.	Pro-prietors' Funds.	Ratio per Cent.	Number of Banks.	Liabilities to Public.	Pro-prietors' Funds.	Ratio per Cent.
Limited Banks—	No.	£	£	Per cnt.	No.	£	£	Per cnt.
Purely provincial................	9	4,865,	1,941,	39·9	8	11,037,	3,490,	31·6
London and provincial	2	1,310,	296,	22·6	2	2,761,	526,	19·1
Total limited	11	6,175,	2,237,	36·2	10	13,798,	4,016,	29·1
Unlimited Banks—								
Purely provincial................	9	5,970,	1,719,	28·8	7	10,022,	1,890,	18·8
London and provincial	—	—	—	—	—	—	—	—
Total unlimited	9	5,970,	1,719,	28·8	7	10,022,	1,890,	18·8
Total limited and unlimited	20	12,145,	3,955,	32·6	17	23,820,	5,906,	24·8
Total purely provincial	18	10,835,	3,659,	33·8	15	21,059,	5,379,	25·5
Total London and provincial	2	1,310,	296,	22·6	2	2,761,	526,	19·1
	20	12,145,	3,955,	32·6	17	23,820,	5,905,	24·8

Locality.	Large Banks. Liabilities to Public over 2,000,000*l*.				Total.			
	Number of Banks.	Liabilities to Public.	Pro-prietors' Funds.	Ratio per Cent.	Number of Banks.	Liabilities to Public.	Pro-prietors' Funds.	Ratio per Cent.
Limited Banks—	No.	£	£	Per cnt.	No.	£	£	Per cnt
Purely provincial................	3	13,671,	1,864,	13·6	20	29,573,	7,294,	24·7
London and provincial	—	—	—	—	4	4,071,	822,	20·2
Total limited	3	13,671,	1,864,	13·6	24	33,644,	8,116,	24·1
Unlimited Banks—								
Purely provincial................	8	34,419,	5,403,	15·7	24	50,410,	9,012,	17·9
London and provincial	2	46,958,	4,216,	9·0	2	46,959,	4,216,	9·0
Total unlimited	10	81,377,	9,619,	11·8	26	97,369,	13,228,	13·6
Total limited and unlimited	13	95,048,	11,483,	12·1	50	131,013,	21,344,	16·3
Total purely provincial	11	48,089,	7,267,	15·1	44	79,984,	16,306,	20·4
Total London and provincial	2	46,959,	4,216,	9·0	6	51,029,	5,038,	9·9
	13	95,048,	11,483,	12·1	50	131,013,	21,344,	16·3

This table shows that the eighteen small purely provincial banks therein tabulated, whose respective liabilities to the public did not exceed 1,000,000*l.*, had proprietors' funds equal to 33·8 per cent.

The fifteen middle-sized purely provincial banks whose respective liabilities to the public were between one and two millions, showed proprietors' funds equal to 25·5 per cent.; whilst the eleven large purely provincial banks, having respectively liabilities to the public of over 2,000,000*l.*, showed proprietors' funds equal to 15 per cent.

Banks confined to great mercantile centres, finding a ready outlet for their resources, and not collecting deposits by means of country branches, require a comparatively large basis of capital.

TABLE XXXVII.—*Ratio per Cent. of Proprietors' Funds to Liabilities to the Public of Forty-four Purely Provincial English Banks, classified according to the Number of their Branches.*

I. *Banks without Branches.*

[000's omitted.]

Banks.	Liabilities to Public.	Proprietors' Funds.	Ratio per Cent.
	£	£	
1. Liverpool Commercial Bkg. Co., *Limited*	1,227,	554,	45·2
2. ,, Union Bank	3,345,	764,	22·8
3. ,, North-Western Bank, *Limited*	1,354,	506,	37·4
4. Bradford Banking Company	2,120,	673,	31·7
5. ,, Commercial Joint Stock Bank	590,	357,	60·5
6. Bank of Leeds, *Limited*	423,	194,	45·8
7. Sheffield and Hallamshire Bank	571,	238,	41·8
8. County of Stafford Bank	421,	95,	22·5
9. Wolverhampton and Staffordsh. Bkg. Co.	894,	141,	15·8
	10,944,	3,523,	32·2

II. *Banks with One, Two, or Three Branches.*

[000's omitted.]

Banks.	Liabilities to Public.	Proprietors' Funds.	Ratio per Cent.
	£	£	Per cnt.
1. Bank of Whitehaven, *Limited*	623,	190,	30·5
2. National Bank of Liverpool, *Limited**	661,	543,	82·0
3. Swaledale and Wensleydale	796,	96,	12·1
4. Bradford District Bank, *Limited*	716,	339,	47·4
5. ,, Old Bank, *Limited*	1,165,	530,	45·5
6. Halifax Comm. Banking Co., *Limited*	399,	190,	47·7
7. Sheffield Banking Company	1,493,	400,	26·8
8. ,, Union Banking Company	438,	220,	50·2
9. Burton, Uttoxeter, and Ashbourn Union	1,254,	199,	15·9
10. Birmingham Joint Stock Bank, *Limited*	1,632,	423,	25·9
11. ,, Banking Company, ,,	1,119,	276,	24·7
12. North Kent Bank, *Limited*	80,	24,	29·9
	10,376,	3,430,	33·0

* Branches in Liverpool and Birkenhead only.

Table XXXVII.—*Ratio per Cent. of Proprietors' Fund—Contd.*

III. *Banks with Four to Ten Branches.*

[000's omitted.]

	Liabilities to Public.	Proprietors' Funds.	Ratio per Cent.
	£	£	
1. Carlisle and Cumberland Bank	639,	179,	28·0
2. ,, City and District ,,	678,	171,	25·2
3. Sheffield and Rotherham ,,	1,671,	247,	14·8
4. Nottingham Joint Stock Bank, *Limited*	576,	128,	22·2
5. Leicestershire Banking Company	1,412,	340,	24·1
6. Staffordshire Joint Stock Bank, *Limited*	685,	235,	34·3
7. Birmingham Town and District Bank	943,	221,	23·4
8. Bucks and Oxon Union Bank, *Limited*	702,	98,	14·0
	7,306,	1,619,	22·2

IV. *Banks with more than Ten Branches.*

[000's omitted.]

	Liabilities to Public.	Proprietors' Funds.	Ratio per Cent.
	£	£	
1. Cumberland Union, *Limited*	1,860,	308,	16·6
2. North and South Wales Bank	4,011,	596,	14·8
3. Parr's Banking Company, *Limited*	2,904,	376,	12·9
4. Manchester and County Bank, *Limited*	5,794,	1,010,	17·4
5. Union Bank of Manchester, *Limited*	1,655,	540,	32·6
6. Manchester and Liverpool District Bank	12,594,	1,477,	11·7
7. Yorkshire Banking Company	2,556,	398,	15·5
8. Stamford, Spalding, and Boston Company	1,311,	303,	23·1
9. Lloyd's Banking Company, *Limited*	4,974,	478,	9·6
10. Stourbridge and Kidderminster	1,182,	186,	15·8
11. Worcester City and County, *Limited*	1,025,	352,	34·3
12. W. of England and S. Wales District Bank	4,515,	900,	19·9
13. Devon and Cornwall Banking Company	1,699,	215,	12·6
14. Wilts and Dorset ,,	3,161,	405,	12·8
15. Hampshire Banking Company	2,116,	191,	9·0
	51,357,	7,735,	15·1

Note.—The following banks are omitted, their figures being, from their recent establishment or other circumstances, quite exceptional, and calculated to disturb the representative ratios, viz., Adelphi Bank, *Limited;* Lancashire and Yorkshire Bank, *Limited;* North-Eastern Bank, *Limited;* Manchester Joint Stock Bank, *Limited;* Three Towns Banking Company, *Limited.*

This table shows ratio of proprietors' funds to liabilities to the public:—

		Per Cent.
9	purely provincial banks without branches	32
12	,, with 1, 2, or 3 branches	33
8	,, with 4 to 10 ,,	22
15	,, with more than 10 branches	15

TABLE XXXVIII.—*Ratio per Cent. of Proprietors' Funds to Liabilities to Public. English Purely Provincial, and London and Provincial Joint Stock Banks by Districts*, 1874.

Districts.	Number of Banks.	Average Number of Offices per Bank.	Liabilities to Public. [000's omitted.]	Proprietors' Funds. [000's omitted.]	Ratio per Cent.
	No.	No.	£	£	Per cnt.
1. Cumberland	4	8	3,800,	848,	22·3
2. Liverpool	4	1½	6,587,	2,367,	35·9
3. North and S. Wales Bank	1	37	4,011,	596,	14·8
4. Manchester	4	29	22,946,	3,403,	14·8
5. Yorkshire	12	4	12,938,	3,881,	30·0
6. Derby, Notts, Lincoln, &c.	4	4	4,553,	970,	21·3
7. Black country	7	8½	10,667,	1,869,	17·5
8. West. and South. Counties	8	16	14,480,	2,371,	16·4
	44		79,982,	16,305,	20·4
9. London and provincial	6	143½	53,995,	5,840,	10·8
	50		133,977,	22,145,	16·5

Note.—In this table the following banks, whose figures are exceptional, have been omitted, viz., the *North-Eastern Banking Company, Limited*, *Lancashire and Yorkshire Banking Company, Limited*, *Manchester Joint Stock Bank, Limited*, and the *London and Yorkshire Bank, Limited*, which are all of quite recent establishment; and the *Adelphi Bank, Limited*, and *Three Towns Banking Company, Limited*, which are both on a small scale.

This table takes the banks by districts, and it will be remarked that the highest ratio is 36 per cent. in the case of the four chief purely Liverpool banks—the next being 30 per cent. in the case of the Yorkshire banks. If the figures of the Yorkshire Banking Company, the only bank of that district which has numerous branches be left out, the remaining eleven Yorkshire banks show a ratio of 33½ per cent. Amongst the purely provincial banks the district in which the ratio is lowest, is that of Manchester, showing nearly 15 per cent., and the four Manchester district banks comprised in the return have all numerous branches.

Distinguishing limited from unlimited banks, the ratios are—

	Per Cent.
Limited—Purely provincial	24½
„ London and provincial	20
Together	24
Unlimited—Purely provincial	18
„ London and provincial	9
Together	13½

The nature of the business done is of course an element of prime importance in determining the proportion which proprietors' funds should bear to liabilities.

The character of the money lodged must be taken into special consideration. Creditor balances of parties engaged in commercial business are not held on nearly so certain a tenure as the sums generally known by the term of deposit money. Large sums are usually held on a more uncertain tenure than small sums. The basis of proprietors' funds should be larger in proportion to the uncertainty of the tenure of the money lodged.

If the loans or advances on current accounts, which cannot be said to be immediately or even proximately available, form a preponderant item in the assets, the proprietors' funds should be of solid proportions. If the advances are chiefly in the shape of bills, a smaller proportion of proprietors' funds will suffice.

If a bank has a much larger amount of deposits than it can employ in its ordinary business with its customers, it may with safety work with a comparatively small substratum of proprietors' funds. Hence it is necessary, before jumping to the conclusion that any bank has too small a basis of proprietors' funds, to see what proportion of its liabilities to the public are held immediately or proximately available outside of its business with its customers.

Generally speaking, banks in a rural district being subject to comparatively few fluctuations in the demand for money, may with propriety carry on business on a smaller basis of capital than banks placed in large commercial centres.

In the tables the absolutely lowest ratios of proprietors' funds to liabilities to public are that of the London Joint Stock Bank, 8·3, and amongst the purely provincial banks, 9 per cent. shown by the Hampshire Banking Company, and 9½ per cent., shown by Lloyd's Banking Company, Limited, of Birmingham.

The London and County Bank and the National Provincial Bank of England show each 9 per cent. Both these banks, as well as Lloyd's Banking Company, Limited, are increasing their capital by the issue of new shares.

The absolutely highest ratios are 110 per cent. in the case of the Three Towns Banking Company, Limited, and 107 per cent. in the case of the North-Eastern Banking Company, Limited, the former a very small concern, and the latter of recent establishment.

In Scotland the highest ratio is 21·3 in the case of the Royal Bank, and the lowest 10·8 in the case of the Bank of Scotland.

In Ireland the highest ratio is 44·3 for the Hibernian Bank, and the lowest 14·6 for the Ulster Banking Company.

So far as I am aware, the only authoritative dictum which we have on this branch of our subject is that of the late Mr. Gilbart, who makes the following remark in his "Practical Treatise on

" Banking :"—" Although the proportion which the capital of a bank " should bear to its liabilities may vary with different banks, perhaps " we should not go far astray in saying it should never be less " than one-third of its liabilities." It is well known that under Mr. Gilbart's own management this rule was widely departed from by the London and Westminster Bank, whose proprietors' funds at 31st December, 1874, bore the proportion of 9·6 per cent. to their liabilities.

I should be sorry to attempt to lay down any hard and fast rule upon the point, but should be disposed to think that for a well established bank, which holds considerable deposits and systematically keeps readily available reserves to the extent of about one-third of its liabilities, the fair proportion of proprietors' funds to banking liabilities should be something between 15 and 20 per cent. The leading London joint stock banks have not only very large deposits of their own, but also hold the balances of a great many of the country banks, and these balances are specially liable to be drawn at a period of commercial distrust or financial pressure. The acceptance business of the great London joint stock banks is also naturally much more extensive than that of any of the provincial banks, and I hope I shall not be considered presumptuous if I venture to suggest that their proprietors' funds ought to bear a much more substantial proportion to their liabilities than they now do.

An incidental advantage of a large paid-up capital is that it keeps down the rate of the dividend. The bloated dividends of some of the principal banks have been remarked upon, and in many cases where the dividend reaches 20 per cent. or upwards, it will be found that the ratio of proprietors' funds to liabilities to the public is feeble.

It would seem to be sounder policy to pay a good dividend on a substantial capital than a very large dividend on a small capital; and one advantage of this policy is that it tends to prevent the shares from rising to a dangerously high premium on the Stock Exchange.

Money Lodged.

The various tables show this item as follows:—

[000's omitted.]

Joint Stock Banks.	Total.	Average.
	£	£
7 Purely London	68,749,	9,821,
7 London and provincial	50,318,	7,188,
49 Purely provincial	79,175,	1,616,
63	198,242,	3,147,
11 Scotch	80,699,	7,336,
5 Irish	17,643,	3,529,

The column of money lodged includes the amount of the dividend due. It comprises money held on current account and on deposit, and also such balances as are held from other banks. For the most part the money lodged is repayable at call; though in the country there is frequently an understanding, sometimes expressed, sometimes merely tacit, that a few days' notice will be given before any very large sum is withdrawn.

It has been frequently asserted that the Scotch banks, as compared with the English, hold a larger proportion of their deposits in small amounts, that in fact they act much more than the English banks do as savings banks for the people. In support of this view it is pointed out that the total savings banks deposits of England and Wales amount to 2*l.* 7*s.* per head of the population, whilst the Scotch savings banks deposits are only 1*l.* 10*s.* 10*d.* per head of the population in Scotland. The National Provincial Bank of England is the most eminently representative provincial bank of England. With its head office in London, it has one hundred and thirty-five branches in the provinces, and there is scarcely a county in England in which it has not an office. That bank and the Scotch banks submitted to the Committee on Banks of Issue in 1875 returns of their depositors and deposits classified according to the sums at credit of each depositor. These returns are embodied in:—

TABLE XXXIX.—*Number of Depositors, and Amount of Deposits in National Provincial Bank of England, and in the Eleven Banks of Scotland, classified according to the Amount at Credit of each Depositor.*

[000's omitted in Cols. 3 and 5.]

1	2	3	4	5	6	7	8	9
Classification of Sums at Credit, according to Amount.	National Provincial Bank of England.		The Eleven Scotch Banks.		Ratio Per Cent. to Totals.			
					National Provincial Bank of England.		Scotch Banks.	
	Number of Depositors.	Amount of Deposits.	Number of Depositors.	Amount of Deposits.	Number of Depositors.	Amount of Deposits.	Number of Depositors.	Amount of Deposits.
	No.	£	No.	£	Per cnt.	Per cnt.	Per cnt.	Per cnt.
Not exceeding 100*l*.	83,723	3,603	290,885	11,768	68·24	15·68	69·65	15·44
Above 100*l*. and not above 200*l*.	16,780	2,518	56,445	8,849	13·68	10·97	13·52	11·66
Above 200*l*. and not above 300*l*.	7,430	1,866	23,253	6,111	6·06	8·21	5·56	8·02
„ 300*l*. „ 400*l*.	4,027	1,432	12,395	4,562	3·28	6·23	2·97	5·83
„ 400*l*. „ 500*l*.	2,896	1,339	8,921	4,600	2·36	5·83	2·14	6·04
Above 500*l*. and not above 600*l*.	1,628	902	5,129	2,927	1·33	3·93	1·22	3·85
„ 600*l*. „ 700*l*.	1,045	687	3,277	2,248	0·85	2·99	0·78	2·96
„ 700*l*. „ 800*l*.	799	601	2,621	2,071	0·65	2·61	0·63	2·72
„ 800*l*. „ 900*l*.	549	470	1,773	1,537	0·45	2·04	0·42	2·02
„ 900*l*. „ 1,000*l*.	911	891	2,855	3,286	0·74	3·88	0·68	4·32
Above 1,000*l*. and not above 2,000*l*.	1,847	2,585	6,240	8,760	1·51	11·26	1·50	11·49
Above 2,000*l*. and not above 3,000*l*.	473	1,171	1,672	4,178	0·38	5·10	0·40	5·49
„ 3,000*l*. „ 4,000*l*.	202	721	736	2,497	0·16	3·14	0·18	3·29
„ 4,000*l*. „ 5,000*l*.	127	570	494	2,341	0·10	2·48	0·12	3·08
Above 5,000*l*. and not above 10,000*l*.	184	1,300	659	4,674	0·15	5·66	0·16	6·14
„ 10,000*l*. „ 15,000*l*.	28	352	146	1,593	0·02	1·52	0·04	2·09
„ 15,000*l*. „ 20,000*l*.	17	305	58	917	0·01	1·33	0·01	1·20
Above 20,000*l*.	34	1,640	98	3,324	0·03	7·14	0·02	4·36
	122,700	22,953	417,657	76,243	100	100	100	100

The very remarkable, and I may say unexpected, coincidence of the ratios to the totals, both of the number of depositors and the amount of deposits, in almost every line of the above table must, be held to prove conclusively that whatever may be the case in certain districts and with certain banks, yet over the length and breadth of England and Wales the money lodged of the banks is held on the average in similar amounts, and from the same classes of the people, as that of the banks in Scotland.

Progress of Money Lodged.

Some very interesting evidence was collected by the Committee on Banks of Issue in 1875 as to the progressive increase of deposits both in England and Scotland.

Table XL illustrates the remarkable progress made by the London joint stock banks since 1844, the figures for that date being taken from Mr. Palgrave's evidence before the Committee in 1875.

Table XL.—*Progress of London Joint Stock Banks*, 1844 *to* 1874.

[000's omitted.]

London Joint Stock Banks.	1844.		1874.	
	Capital.	Deposits.	Capital.	Deposits.
London and Westminster	800,	2,677,	2,000,	30,020,
" Joint Stock	600,	2,245,	1,200,	16,000,
Union	423,	1,591,	1,395,	14,120,
Commercial	80,	240,	—	—
London and County	160,	1,231,	1,348,	20,072,
City	—	—	600,	3,290,
Imperial, *Limited*	—	—	675,	2,110,
Central, *Limited*	—	—	100,	770,
Alliance, *Limited*	—	—	800,	1,922,
Metropolitan, *Limited*	—	—	191,	300,
	2,063,	7,984,	8,309,	88,604,

The increase of money lodged here shown is no less than 1010 per cent.; an enormous augmentation, even if allowance be made for the absorption of several large private banks.

Mr. Palgrave obtained returns from thirty-six issuing banks in England in 1874 as compared with 1844, and these showed an average increase of 250 per cent., in other words the money lodged in 1874 was 3½ times as large as it was in 1844.

The evidence of Mr. Davidson, Treasurer to the Bank of Scotland, on the progress of Scotch banking at intervals of ten years from 1845, exhibits the following results as regards money lodged:—

Scotland.	Money Lodged.	Proportion to 1845.
	£	
1845	33,192,000	100
'55	43,271,000	130
'65	56,185,000	169
'75	78,405,000	239

Comparing Mr. Palgrave's figures for thirty-six English provincial banks of issue with the Scotch figures, it would appear that the increase of deposits has been more rapid in England than in

Scotland. But the progress in Ireland has been still more remarkable.

Dr. W. Neilson Hancock, in his Report to the Irish Government, on "Savings Invested in Ireland" (Midsummer, 1875), gives the money lodged in the Irish banks as follows:—

Ireland.	Money Lodged.	Proportion to 1840.
	£	
1840	6,125,000	100
'74	31,700,000	518

Dr. Hancock remarks, "the increase of deposits and cash "balances in the Irish joint stock banks from 6,125,000*l.* in 1840, "to 31,815,000*l.* in 1875, or of 25,690,000*l.*, is the most important "figure" of the growth of savings invested in Ireland during that period. "Making every allowance," he adds, "for the extension of "branches and the increased facilities of intercourse bringing to the "banks money that was hoarded or kept in cash boxes and shop tills, "this increase of 25,690,000*l.* must represent a very large and substantial increase of wealth."

It may be interesting to note here the progress of the savings bank deposits in England, Scotland, and Ireland, during the period 1844 to 1874.

TABLE XLI.—*United Kingdom Savings Banks Deposits,* 1844 *to* 1874.

[000's omitted.]

Year.	England and Wales.				Scotland.			
	Old Savings Banks.	Post Office.	Total.	Proportion to 1844.	Old Savings Banks.	Post Office.	Total.	Proportion to 1844.
	£	£	£	Per cnt.	£	£	£	Per cnt.
1844	25,713	—	25,713	100	1,043	—	1,043	100
'54	30,197	—	30,197	117½	1,932	—	1,932	185
'64	34,728	4,688	39,416	153	2,819	124	2,943	282
'74	34,521	21,826	56,347	219	4,969	418	5,387	516½

Year.	Ireland.				Total United Kingdom.	Proportion to 1844.
	Old Savings Banks.	Post Office.	Total.	Proportion to 1844.		
	£	£	£	Per cnt.	£	Per cnt.
1844	2,749	—	2,749	100	29,505	100
'54	1,608	—	1,608	58½	33,737	114⅓
'64	1,973	182	2,155	79	44,514	151
'74	2,016	914	2,930	107	64,664	219

From the "Commercial History and Review" of the years 1870 and 1874, published by the "Economist," and from the Table of balance sheets of thirty-four purely provincial English banks, prepared for 1870, and printed on pp. 92 to 95, and from Table XXVII, I am enabled to give the following view of the progress of deposits:—

1st of seven purely London banks.
2nd of five London and provincial banks.
3rd of thirty-four purely provincial banks.

Table XLII.—*Progress of Money Lodged in certain English Banks, Four Years,* 1870 *to* 1874.

[000's omitted in columns headed £.]

England.	Money Lodged.		Increase or Decrease.	Increase or Decrease per Cent.
	1870.	1874.		
	£	£	£	Per cnt.
Purely London—				
London and Westminster	21,980,	30,020,	+ 8,040,	+ 37
„ Joint Stock (estimated)	14,000,	16,000,	+ 2,000,	+ 14
Union	11,210,	14,120,	+ 2,910,	+ 26
City	2,440,	3,290,	+ 850,	+ 35
	49,630,	63,430,	+ 13,800,	+ 28
Imperial	1,530,	2,110,	+ 580,	+ 38
Central	470,	770,	+ 300,	+ 64
Metropolitan	540,	300,	− 240,	− 44
	2,540,	3,180,	+ 640,	+ 25
London and Provincial—				
National Provincial	15,735,	22,953,	+ 7,218,	+ 46
London and County	13,390,	19,890,	+ 6,500,	+ 48
	29,125,	42,843,	+ 13,718,	+ 47
Consolidated	2,340,	3,070,	+ 730,	+ 31
Midland	1,035,	1,432,	+ 397,	+ 38
London and South-Western	540,	910,	+ 370,	+ 68
	3,915,	5,412,	+ 1,497,	+ 38
Purely Provincial—				
4 Cumberland banks	2,433,	3,739,	+ 1,306,	+ 54
4 purely Liverpool	3,186,	5,544,	+ 2,358,	+ 74
1 North and South Wales	2,157,	3,890,	+ 1,733,	+ 80
3 Manchester district banks	4,924,	10,285,	+ 5,361,	+ 109
10 Yorkshire banks	7,250,	11,581,	+ 4,331,	+ 60
3 Derby, Notts, and Lincoln	2,400,	3,096,	+ 696,	+ 29
5 Black Country	5,481,	9,352,	+ 3,871,	+ 71
4 West and South Counties	5,362,	7,941,	+ 2,579,	+ 48
34 banks. Total	33,193,	55,428,	+ 22,235,	+ 67

TABLE XLIII.—*Progress of Money Lodged in Scotch and Irish Banks, Four Years*, 1870 *to* 1874.

[000's omitted in columns headed £.]

SCOTLAND.	Money Lodged.		Increase or Decrease.	Increase or Decrease per Cent.
	1870.	1874.		
Edinburgh Banks—	£	£	£	
Bank of Scotland	8,227,	10,881,	+ 2,654,	+ 32
Royal	8,686,	10,546,	+ 1,860,	+ 21
British Linen Company	7,283,	7,957,	+ 674,	+ 9
Commercial	7,533,	9,588,	+ 2,055,	+ 27
National	8,282,	11,034,	+ 2,752,	+ 33
Glasgow Banks—				
Union Bank	8,296,	9,965,	+ 1,669,	+ 20
Clydesdale	5,293,	6,859,	+ 1,566,	+ 29
City	6,107,	8,489,	+ 2,382,	+ 39
Country Banks—				
Aberdeen Town and County	1,448,	1,848,	+ 400,	+ 28
North of Scotland	1,862,	2,479,	+ 617,	+ 33
Caledonian	741,	1,053,	+ 312,	+ 42
	63,758,	80,699,	+16,941,	+ 26
IRELAND	24,366,	31,700,	+ 7,334,	+ 30

It will be observed that in these four years the increase of money lodged in the English provinces has been greater than that in London, Scotland, or Ireland.

Acceptances.

The tables show the acceptances to be as follows:—

[000's omitted.]

Joint Stock Banks—	£
7 London	15,383,
7 ,, and provincial	4,070,
49 purely provincial	1,325,
11 Scotch	5,120,
1 Irish (the others not stated)	36,

The acceptances of a London bank may be classified as follows:

I. Acceptances of the drafts of its country correspondents drawn at seven, fourteen, or twenty-one days, for purposes of remittance.

II. Acceptances at various dates up to ninety days against credits established by banking correspondents in the country.

III. Acceptances on account of foreign and colonial banks having head offices in London.

IV. Acceptances to mercantile firms and companies abroad.

Acceptances of Class I are perfectly legitimate and unobjectionable. Those of Class II are likewise unobjectionable where the position of the country correspondent is undoubted. Acceptances of Class III should be kept within judicious bounds, and should be well covered by available securities. Those of Class IV are probably best avoided entirely. Being generally drawn against shipping documents surrendered to the bank on acceptance, they are much more within the province of the merchant than of the English bank or banker.

Acceptances differ from ordinary advances to customers simply in this, that instead of being made in cash, they are made by means of the bank's obligation to pay at a future fixed date. Their ultimate payment to the bank may, for argument's sake, be assumed to be as well secured as if the accommodation had been given in the shape of cash advanced. But the bank is committed to meet them as they become due. If the securities held are such as are certain of realisation before maturity of the acceptances granted against them, then the risk of the business is reduced to a minimum. If, however, the customer fails to provide for the acceptances, and the securities lodged cannot be realised in time to meet them, the bank must take them up. A bank largely under acceptance has need therefore to keep at all times a much larger reserve of cash and surplus funds in a readily available shape than a bank which confines its accepting business within strictly moderate limits.

The acceptances of the London Joint Stock Bank as included in the above amount are merely estimated. They were stated at December, 1873, to amount to 4,517,000*l.* I have assumed them at 4,527,300*l.* The reserves of this bank in cash and Government securities bear the ratio of 16·3 per cent. to its total liabilities to the public.

The absolutely highest amount of acceptances shown by any of the banks is 4,957,000*l.*, in the case of the Union Bank of London, who mention having cover in hand amounting to 7,590,154*l.* Their acceptances are in the ratio of very nearly 35 per cent. to their money lodged. They have cash and Government securities amounting to 42·1 per cent. of their liabilities to the public.

The City Bank has acceptances equal to rather more than four times the amount of its proprietors' funds, and actually equal to the total of its money lodged, a very unusual feature. Its reserves in cash and Government securities are 17 per cent. of its liabilities to the public.

Nor is it at all clear that the City Bank derives a commensurate accession of profit from the extended use of its credit in accepting. The net profit earned by the three senior London banks is at the rate of 1·2 per cent. on their total resources, including acceptances, or at the rate of 1·4 per cent. on their total resources, excluding acceptances. The net profit earned by the City Bank is at the rate of 0·84 per cent. on its total resources, including acceptances, or at the rate of 1·5 per cent. on its total resources, excluding acceptances. Either, therefore, the general business of the City Bank must be very much less profitable than that of its neighbours, or the profits of its large acceptance business must be very inadequate. The latter seems to be the more probable inference of the two.

As a rule the acceptances of the purely country banks are *nil.* The Liverpool banks accept to a moderate extent, and the London and County Bank, in virtue of its metropolitan position, is led to do a considerable business in that way. When the capital and surplus funds of a bank and its *locale* warrant it, and when sufficient security is invariably held, such a use of its credit to a moderate extent may be legitimate. The Bank of England does not accept. The New German Bank Act provides that no bank of issue shall accept bills, and several witnesses before the Committee of the House of Commons on Banks of Issue, stated as a probable result of the Scotch banks establishing themselves in London, that they might be tempted to enter more largely on the business of accepting than might be prudent for banks entrusted with the responsible function of providing a sound note currency for their own country. In justification of this view it will be observed that the Bank of Scotland and the National Bank of Scotland, who have both been established in London for some years, accept more extensively than any of the other Scotch banks, the figures being for these two banks 2,667,000*l.*, against 2,453,000*l.*, for the other nine.

Estimated Distribution of Items of Liabilities.

The various items of the liabilities having thus been discussed systematically, it may now be instructive to calculate and collate the percentages of the individual items to their total in each of the territorial divisions of the investigation.

Adopting the figures of the tables in the case of the purely London, London and provincial, purely provincial English, and the Scotch banks, and basing on Dr. Hancock's figures for the Irish banks, we have the following results:—

TABLE XLIV.—*United Kingdom Liabilities of Joint Stock Banks. Estimated Percentage of Items to Total Resources*, 1874.

Items of Liabilities.	England and Wales.			Scotland.	Ireland.
	Purely London.	London and Provincial.	Purely Provincial.		
	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.
Capital paid-up	7·3	7·1	12·1	9·2	14·0
Reserve fund	2·7	2·9	5·4	3·6	5·6
Proprietors' funds	10·0	10·0	17·5	12·8	19·6
Money lodged	73·5	83·2	80·3	76·1	65·5
Note circulation	—	—	0·9	6·2	14·9
Acceptances	16·5	6·8	1·3	4·9	—
Liabilities to public	90·0	90·0	82·5	87·2	80·4
Total	100·0	100·0	100·0	100·0	100·0

IV. ANALYSIS OF ASSETS.

Thus far we have considered only the debtor side of the balance sheets before us, the total resources of the banks, and the various heads under which they fall. We now turn to the creditor side of the balance sheets, showing the assets of the banks, and it should be premised here that as the diversity of practice in making up the balance sheets renders it impossible to attain perfect consistency in arranging the assets under their various heads of (1) Cash; (2) Government securities and other investments; (3) Bills and advances, the results attained must be understood to be by no means so accurate as could be desired.

Cash and Surplus Funds.

These are the cash balance and the Government and other securities and money placed in a readily available position outside of the business of the bank with its customers.

A bank's *first* line of defence against a possible demand for money on the part of its customers must be the actual legal tender in its coffers. This should always be sufficient for ordinary requirements, with an ample margin for sudden emergencies. The extent of that margin must be regulated according to the locality of the bank, and the rapidity with which it can replenish its actual cash balance from its *second* line of defence, which consists in its balances at call, especially with the Bank of England. Banks situated in London, or in close proximity to a branch of the Bank of England, may regard their balances with the Bank of England as practically equivalent to cash in hand. Banks less favourably situated must of course be more fully supplied with actual legal tender. Issuing banks of undoubted credit, and in a position to add freely to their circulation at any moment, may work with a comparatively smaller balance of legal tender.

The Appendix to the evidence collected by the Committee of 1875 on Banks of Issue, contains amongst other interesting particulars of the National Provincial Bank of England, the following return of their actual cash balance at 31st December, 1874.

	£
Gold	524,390
Silver	90,043
Bank of England notes	467,045
	1,081,478
Notes of other banks	113,875
	1,195,353

This is as nearly as possible 5 per cent. of their liabilities to the public, and it may be assumed that a non-issuing country bank, with branches, requires to maintain nearly that proportion of its liabilities as till money in the shape of legal tender.

The *third* line of defence lies in readily available investments. In the first rank of these come English Government securities, which are generally available either for immediate sale or as security for an advance. Amongst the other readily convertible investments suitable for a bank are the Government securities of India and the Colonies, first class English railway debenture stock, and, to a moderate extent, well selected foreign government securities; the last named having this great advantage, that being saleable on foreign markets, they are less liable to depreciation than English securities during any financial pressure affecting only the London market. Metropolitan corporation bonds are held by many banks, and good local corporation bonds may also be taken to a moderate extent, but these are seldom realisable to any large amount on a sudden emergency.

Every investment held by a bank should be written down to such a price as it would be certain to realise under unfavourable circumstances, otherwise the risk is run of a serious inroad upon profits at the very time when these are specially apt to be diminished by bad debts of exceptional amount. It is customary, therefore, with the best banks to hold their English Government securities at or under 90, and all other investments should be treated on a similar principle.

All the principal London and London and provincial banks, all the Scotch banks, and all the Irish banks, which publish balance sheets hold English Government securities. So also do most of the English provincial joint stock banks.

Twenty-three out of the fifty-six purely provincial English and London and provincial banks in Tables XXVII and XXIV, do not appear from their balance sheets to have any English Government securities.

Several of the English country banks hold first-class home railway debenture stocks. The Birmingham Joint Stock Bank gives the following detail of its investments:—

	£
Consols	100,000
American Government securities	20,000
Indian ,,	10,000
English railway debenture stocks	70,000
	200,000

Under this line of defence may be included the bills discounted for bill brokers, which are generally and legitimately available for rediscount at any moment, and doubtless many of the banks which hold no Government securities prefer to see their reserves in first-class brokers' bills rather than in consols.

The *fourth* line of defence is money at short notice, generally three, seven, or fourteen days, with the London discount houses, on security of first-class bills, and with stock brokers of high standing on first-class stocks, with a margin. The last named class of business should of course be kept within narrow limits.

When there are surplus funds on hand beyond what are required to furnish amply these various lines of defence, the remaining balance may be employed, without undue risk and with a fair profit, in loans for one, two, or three months, on first class home railway stocks, with a good margin.

The *fifth* line of defence of a bank lies in the best of its bills discounted for customers. Nothing, as I have indicated, can be more legitimate than for a bank to bring into the discount market, as occasion requires, the bills it may have previously discounted for the discount houses; but it is also by no means uncommon for English provincial banks in mercantile centres, and without large deposits, to rediscount their customers' bills frequently, if not habitually. This, however, is a custom more honoured in the breach than the observance, for it is evident that the bank habitually dependent on rediscounting is exposed to the risk of finding its usual channels of discount suddenly stopped during a period of financial difficulty. The rediscounting of customers' bills is a consequence of what may be styled the one-sided character of a good many of the English provincial banks. There may be said, speaking broadly, to be three classes of English country banks:—

1st. Those which are chiefly deposit banks, and have not a sufficient outlet for the employment of their money lodged in customers' bills or advances. Such are many banks in the agricultural districts.

2nd. Deposit banks which from having offices in commercial centres have a sufficient banking outlet for the funds at their command.

3rd. Banks which being situated in large commercial centres, and not holding large deposits, have to draw from the London bankers and brokers, by rediscounting their own customers' bills, a considerable portion of the funds which they employ in the business of their district.

In consequence of the great increase of money lodged during the last twenty years, banks of the third class are now much fewer in number than they used to be; but habitual rediscounting being a practice to be deprecated, the interests of sound banking would be served by the extensive fusion of banks of Class 3 with those of Class 1.

A careful comparison of the balance sheets analysed has convinced me that it is impossible to deal with the three columns, "bills and advances," "Government and other securities," and "cash, &c.," as representing respectively the same items throughout, and that, therefore, any conclusions deduced from them cannot be accepted without some correction.

With the London banks, as a rule, money at notice and short loans on stocks seem to be included in "bills and advances," and only cash on hand and at call falls into the "cash" column.

With the London and provincial banks money at notice seems to fall generally under the column for "cash," whilst short loans on stocks are probably included in "bills and advances."

Of the English purely provincial banks some class notice-money with "cash," some with "Government and other securi- "ties;" some rank short loans on stocks with "Government and "other securities," and some with "bills and advances."

With all the Scotch banks notice-money and short loans in London seem to fall under the head of "Government and other "securities."

Of the Irish banks, some rank notice-money with "bills and "advances," and some with "Government and other securities."

With all the banks, except one or two of those in the English provinces, brokers' bills discounted seem to fall under "bills and "advances," instead of under "Government and other securities," to which head they seem more correctly to belong.

It has been stated that some of the London joint stock banks habitually call in advances from the Stock Exchange, at the close of each half-year, in order to parade in their published balance sheets a show of strength in cash reserves which they do not normally maintain. The practice is discreditable.

Ratio of Cash and Surplus Funds to Liabilities to Public.

Subject to these very needful explanations, I proceed to deal with the ratios of surplus funds, *i.e.*, "Government securities" and "cash" to liabilities to public.

These are :—

	Average Ratio of Cash and Surplus Funds to Liabilities to Public.
ENGLISH : Purely London—	
4 senior banks, unlimited	26·3 per cent.
5 other „ limited	25·4 „
London and provincial—	
2 senior banks, unlimited	38·0 „
5 other „ limited	28·6 „
Purely provincial—29 banks	30·9 „
SCOTCH—11 banks	30·8 „
IRISH—5 banks	32·0 „

Amongst the London banks the highest ratio is 42·1 per cent., shown by the Union Bank; the lowest 16·3, shown by the London Joint Stock Bank.

Amongst the London and provincial banks the highest ratio is 42·4 per cent., that of the National Provincial Bank; the lowest 14·0 per cent., that of the London and Yorkshire Bank, *Limited.*

Amongst the purely provincial English banks the highest ratios are :—

	Per Cent.
Wilts and Dorset	62·2
Parr's Banking Company, *Limited*	48·2
Stamford, Spalding, and Boston	47·3

And the lowest :—

Liverpool Commercial, *Limited*	7·8
Bank of Leeds, *Limited*	7·7

With regard to the two latter and other banks, which show an apparently feeble ratio of cash and surplus funds to liabilities to the public, it must be explained that where first-class bills from the discount brokers are largely held, and are classed under "bills and "advances," the ratio of cash and surplus funds to liabilities to the public ceases to afford any indication of the strength of the banking reserves held outside of the business of the bank with its customers.

Amongst the Scotch banks the highest ratios are:—

	Per Cent.
Caledonian Bank	37·0
Clydesdale	34·6

And the lowest:—

City of Glasgow	27·8
Aberdeen Town and County	24·0

Amongst the five Irish banks whose balance sheets are published, the highest ratios are:—

	Per Cent.
National Bank	42·6
Ulster Banking Company	25·8

And the lowest:—

Munster Bank, *Limited*	16·9
Hibernian	11·4

The ratios shown by the London banks would probably be on the average higher than those shown by the Scotch banks, if like the latter the London banks included notice-money and short loans on stocks amongst their surplus funds.

Probably the fair proportion for a bank to hold in cash and convertible investments, and in other readily available forms, is, speaking generally, about 30 per cent. of its liabilities to the public. Anything materially below 25 per cent. would seem to be quite inadequate, but, as already indicated, allowance must be made, not only for the local circumstances of the bank, but likewise for the diversities in the mode of classing the assets in the published balance sheets.

Money Lent.

The proportion of money lent to customers in the discount of bills and as loans or overdrafts on current accounts, must depend in a great measure on local circumstances. In some localities, and especially in rural districts, the course of trade gives rise to comparatively few bills, and the bill case, if maintained at anything like an adequate point, must consist mainly of bills obtained from the London brokers.

Generally speaking, good customers' bills are to be preferred to advances, whether on open accounts or in the shape of fixed loans. They can readily be made use of to a considerable extent by rediscounting on an emergency, when it would injure a bank's business, and perhaps seriously affect its credit, to call in, or even to restrict, its cash advances.

Loans to customers or advances on current accounts are probably more remunerative than bills, but they have this characteristic, which should never be lost sight of by the prudent banker, that so far from being an asset from which he can derive available funds on an emergency, they have a decided tendency to increase during a period of financial or commercial pressure, and due allowance must be made for this tendency in regulating the amount of surplus funds which should be kept proximately available.

Country banks are in the practice of giving advances to their customers on current accounts, either unsecured or covered by collateral security.

Unsecured advances should of course be made only to parties whose means, character, and standing amply warrant the accommodation. Any customer seeking an advance, and not covering it by satisfactory security, should be required to satisfy the banker as to his capital and his ability to repay the advance within a reasonable time.

The securities upon which English country banks usually make advances are :—

1. Guarantees by third parties. This mode of advance is practically the same as the cash credit system of Scotland.

2. Mortgage, or deposit of deeds by way of equitable mortgage, of property of sufficient ascertained value. If advances are exceptionally made against the deeds of works or other manufacturing premises, these should not be relied upon beyond their undoubted value under the adverse circumstances of a forced sale, and denuded of trade fittings and machinery. There seems to be a considerable advantage both to the English banks and the public in the system of equitable mortgage by deposit of title deeds, a mode of security foreign to Scotch law.

3. Good railway and other stocks transferred to the bank.

4. Foreign, and Colonial Government, and other first-class bonds to bearer.

The London banks do not, I believe, grant over-drafts on current accounts. They give cash advances of a fixed amount, and for a fixed time. The securities they accept are pretty much the same as those admitted by the country banks, with the addition to the list of dock warrants and other vouchers for goods and produce, which are rarely seen by country banks, except at the principal seaports. The West End London bankers naturally advance more on deeds of property than the City bankers.

Proportion of Bills to other Advances.

It is the practice of very few of the banks to distinguish in their published balance sheets between money advanced on loans to their customers and money advanced in the discount of bills.

None of the London or of the London and provincial banks do so.

Only thirteen of the purely country banks make the distinction so clearly as to enable us to use the figures as the basis of any calculation. The details are as follows:—

Thirteen English Provincial Joint Stock Banks separating Bills from Advances or Current Accounts.

Banks. [000's omitted.]		Bills.	Advances on Current Accounts.
	£	£	£
Liverpool Commercial	—	902,	637,
„ Union	—	1,727,	1,219,*
Parr's Banking Company	—	695,	1,153,
Bradford Banking Company—			
Cash and bills	916,		
Off, 16 per cent. of total resources, for cash	447,		
Bills estimated		469,	1,712,
Bradford Old Bank—			
Cash and bills	709,		
Off, 16 per cent. of total resources, for cash	271,		
		438,	915,
Leicestershire Banking Company	—	267,	970,
Staffordshire Joint Stock Bank	—	386	410,
Lloyd's Banking Company	—	1,830,	—
Advances on current accounts, consols, freehold, Government, and other securities	2,697,		
Off, 11 per cent. of total resources, for Government securities and freehold	600,		
Estimated advances		—	2,097,
Birmingham Joint Stock	—	888,	759,
„ Banking Company	—	645,	439,
„ Town and District	—	590,	444,
Worcester City and County	—	510,	613,
Halifax Commercial	—	—	—
Current accounts and bankers	287,		
Say, off, for bankers	37,		
		283,	250,
		9,630,	11,618,

* Includes advances by acceptance, 773,000*l.*

In calculating from these data it must not be forgotten that they are not sufficiently representative or extensive to form a basis for any absolutely certain conclusion. The result of the figures is that bills represent 45 per cent. and advances 55 per cent. of the aggregate total of the two.

I have endeavoured to check this calculation by means of the amount of rebate.

The practice of banks varies somewhat in the matter of rebate. In strictness the proper rate of rebate for each bill would be the rate at which it was discounted, but this would involve such multiplicity of calculations that it is not generally adopted, though I am informed it is the practice with the Bank of England and the London and Westminster Bank. The ordinary practice is to rebate all the bills on hand at a general balance at one rate, which may be, (1) an approximate estimate of the average rate at which the bills were discounted, or (2) the Bank of England minimum rate of the day, or (3) the outside market rate of the day, or (4) a fixed rate of say 5 per cent. Probably the best practice is to adopt the Bank of England rate of the day, but never less than 5 per cent. Some few banks may set aside a lump sum sufficient amply to cover rebate without making any detailed calculation, but these must be quite the exception.

From inquiry and reflection, I am of opinion that the average unlapsed currency of the bills held by country banks may be taken as forty-nine days.

Eight purely provincial banks show in the aggregate bills and advances 20,458,000*l.* and rebate 85,000*l.* Assuming the rebate to be at 5 per cent., the market rate of 31st December, 1874, the bills at forty-nine days to run would amount to 12,660,000*l.*, showing bills to be 62 per cent. of the conjoined total of bills and advances. But these eight banks are all in commercial districts, where customers' bills are more abundant than in rural areas, and I venture to think that for the whole of provincial England the bills and advances may be taken to stand to one another in the very equal ratio of 50 to 50.

Only two of the Scotch banks separate their bills from their other advances; these are—

Scotch Banks.	Bills.	Current Accounts.
	£	£
British Linen Company	4,709,000	2,784,000
Clydesdale	4,567,000	1,904,000
	9,276,000	4,688,000

If these two banks might be considered fairly representative, it would appear that relatively to the total of bills and open accounts, bills stand in Scotland for 66 per cent. and open advances for 34 per cent. A few years ago the figures of a third leading Scotch bank showed the ratio of 70 to 30. As the bills include brokers' bills, and the amount of these held must fluctuate greatly, the normal ratio of bills to advances can at best be little more than a matter of conjecture. After inquiry and reflection, I think that in placing the average ratio for the whole of the Scotch banks at 60 to 40, I shall not be very wide of the mark. None of the Scotch banks publish the amount of their rebate, so this estimate cannot be checked by that means.

In Ireland, three out of five banks publishing balance sheets separate bills from advances. These are—

[000's omitted.]

Irish Banks.	Bills.	Advances on Current Accounts.
	£	£
Hibernian	1,265,	892,
National	4,683,	2,412,
Royal	1,420,	407,
	7,368,	3,711,

These banks show the following percentages to the total of bills and advances:—

	Per Cent.
Bills	67
Advances on open accounts	33
	100

These ratios cannot be verified by means of the rebate. I will therefore set down the ratio as the same as for Scotland, viz., 60 to 40 on the average of all the banks.

With regard to the London and London and provincial banks, the only means of estimating the proportion of bills held is through the rebate.

We find that seven purely London banks with bills and advances amounting to 44,461,000*l.* show rebate amounting to 80,000*l.* At 5 per cent. and forty-nine days to run, this would show bills amounting to 12,000,000*l.*, or 28 per cent. of the conjoined total of bills and advances; but as it is represented to me that the average unlapsed currency of the bills in the hands of the London banks is somewhat less than forty-nine days, I adopt the following percentages:—

	Per Cent.
Bills discounted	30
Loans	70
	100

No small portion of the loans of the London banks, be it remembered, is against bills lodged in security. The smallness of this proportion of bills is accounted for by the fact that not only short loans on stocks, but also notice-money, is by the London banks ranked under "bills and advances."

Five London and provincial banks, with aggregate bills and advances of 23,222,000*l.*, show a total rebate of 75,000*l.* Assuming the average unlapsed currency in this case at forty-nine days, and taking the rebate at 5 per cent., the bills would amount to 11,180,000*l.*, or 48 per cent. of the aggregate total of bills and advances. From information kindly furnished to me, I am, however, satisfied that the following percentages rather understate the proportion of bills in this section of banks:—

	Per Cent.
Bills	50
Advances	50
	100

It will be remembered that with these banks "bills and advances" include short loans on stocks, but not notice-money.

To recapitulate, my estimates of the separate proportions of bills and advances in the column for "bills and advances" in the various tables are:—

Banks.	Bills discounted.	Advances.
Purely London	30	70
London and provincial	50	50
Purely provincial	50	50
Scotch	60	40
Irish	60	40

These figures do not show the proportional amounts of bills held by the different classes of banks. They simply show what proportion of the column "bills and advances" consists of bills.

Property Account.

The column for property account seems to call for little remark. It need scarcely be pointed out that all property should be held at or under its realisable value, and that where it is held on lease with less than twenty years to run, sufficient sums must from time to time be set aside to replace its cost before the expiry of the lease.

Estimated Distribution of Items of Assets.

An estimate of the distribution of the assets of the banks of the various divisions of the United Kingdom may now be attempted, although it will be evident that the endeavour is much more of a leap in the dark than that made with regard to the debtor side or liabilities.

The items of the purely London and of the London and provincial banks are contained in the tables, and bills may be reckoned as 30 per cent. in the former case, and as 50 per cent. in the latter case of the aggregate of "bills and advances."

With the purely provincial English banks it is not so easy to determine the proportional relations of the various columns of assets. I have, however, endeavoured to calculate them in the following manner:—

Number of Banks.	Total Resources. [000's omitted.]	Items as under, included in Total Resources. [000's omitted.]		Percentage to Total Resources.
No.	£		£	Per cnt.
26	55,445,	Bills and advances	40,140,	72·5
26	55,445,	Government and other securities	5,231,	9·5
27	56,481,	Cash at call and notice	9,226,	16·5
47	95,820,	Property account	1,332,	1·5
—	—		—	100·0

Assuming that the bills bear to the bills and advances the ratio of 50 per cent., as already estimated, the assets of the purely provincial banks would seem to be distributed in the following proportions:—

Bills discounted	36·2
Advances on open accounts	36·3
Government and other securities	9·5
Cash at call and notice	16·5
Property account	1·5
	100·0

Pursuing the same method with the Irish banks, we have:—

Number of Banks.	Total Resources. [000's omitted.]	Items as under, included in Total Resources. [000's omitted.]		Percentage to Total Resources, nearly
No.	£		£	Per cnt.
4	19,280,	Bills and advances	13,572,	69
3	18,797,	Government securities	3,165,	16
3	18,797,	Cash	2,437,	13
4	19,280,	Property	406,	2
				100

And dividing the percentage of bills and advances in the aggregate, between bills and advances in the proportion of 60 to 40 already arrived at, we have for the Irish proportion of assets:—

Bills discounted	41·5
Advances	27·5
Government securities, &c.	16·0
Cash	13·0
Property	2·0
	100·0

For the Scotch banks we possess all the items, and have simply to separate bills from advances in the ratio of 60 to 40.

Placing the proportions side by side we have :—

TABLE XLV.—*United Kingdom Joint Stock Banks; Estimated Percentage of Various Items of Assets to Total,* 1874.

Items of Assets.	Purely London.	London and Provincial.	Purely Provincial.	Scotch.	Irish.
	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.
Bills discounted	22·8	32·5	36·2	43·2	41·5
Advances	53·2	32·5	36·3	28·8	27·5
Together	76·0	65·0	72·5	72·0	69·0
Government securities, &c.........	9·0	14·5	9·5	21·0	16·0
Cash	14·5	18·5	16·5	6·0	13·0
Together	23·5*	33·0	26·0	27·0	29·0
Property	0·5	2·0	1·5	1·0	2·0
	100·0	100·0	100·0	100·0	100·0

* Were short loans on stock and notice-money, or even notice-money alone, transferred from "bills and advances" to "cash and Government securities" in the case of the London banks, this ratio would of course be greatly strengthened.

TABLE XLVI.—*English Provincial Joint Stock Bank Balanc*

[000's omitted in columns headed £,

Number.	Bank.	1 Liabilities. Paid-up Capital.	2 Reserve and Undivided Profit.	3 Money Lodged and other Liabilities to Public.	4 Total Resources.	5 Assets. Bills and Advances.	6 Government and other Securities.	7 Cash, &c.	8 Property Account.
		£	£	£	£	£	£	£	£
1	Carlisle & Cumb. Bg. Co.	52,	44,	424,	520,		510,		10,
2	Cumbland. Union, *Lmtd.*	225,	67,	1,155,	1,446,	1,025,	65,	320,	35,
3	Carlisle City and Dist.....	80,	81,	409,	569,		564,		5,
4	B. of Whitehaven, *Lmtd.*	73,	38,	506,	617,	359,	176,	74,	9,
5	Liverpool Comml., *Lmtd.*	350,	201,	783,	1,333,	977,	—	206,	150,
6	" Union	450,	238,	1,765,	2,453,	2,162,	—	256,	35,
7	Nat. of Liverpool, *Lmtd.*	449,	58,	323,	830,	739,	—	71,	21,
8	N.-Western, *Ld.*, L'pool.	405,	54,	715,	1,174,	1,041,	—	100,	33,
9	N. & S. Wales, Liverpool.	300,	160,	2,316,	2,776,	1,785,	991,		—

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* Half-

Here and at pp. 136 to 145 are printed tables of English provincial balance sheets for 1870 and 1873, London and provincial balance sheets for 1873, and Scotch balance sheets for 1866 and 1870. These tables may be useful for comparison with those of Section II.

Sheets for 1870, *with Analysis, Dividends, Prices, and Yield.*
thus 225 – 225,000*l*., except in Col. 9.]

9	10	11	12	13	14	15	16	
Analysis.								
Net Profits, less Charges.	Ratio per Cent. of Net Profits to Total Resources.	Government Securities, Cash, &c.	Ratio per Cent. of Government Securities, Cash, &c., to Liabilities to Public.	Dividend per Cent. per Annum.	Amount per Share Paid.	Market Price, January, 1871.	Yield per Cent. per Annum at Market Price.	Number.
£	Per cnt.	£	Per cnt.	Per cnt.			£ *s.* *d.*	
13,7	2⅝	—	—	20	5	15	6 13 4	1
27,4	1⅞	386,	33	12	12½	28	5 7 2	2
16,8	3	—	—	20	12½	39	6 8 2	3
13,2	2⅛	250,	49	16¼	10	30	5 8 4	4
32,7	2½	206,	26	10	10	16	6 5 –	5
70,3	2⅞	256,	14	10	15	22	6 16 4	6
12,7*	3	71,	21	5⅚	15	12	7 5 10	7
36,1	3	100,	14	5½	7½	7	5 17 10	8
52,8	1⅞	991,	42	20	10	24	8 6 8	9

year's profits.

TABLE XLVI.—*English Provincial Joint Stock Bank Balance Sheets*

Number.	Bank.	1 Liabilities. Paid-up Capital.	2 Reserve and Undivided Profit.	3 Money Lodged and other Liabilities to Public.	4 Total Resources.	5 Assets. Bills and Advances.	6 Government and other Securities.	7 Cash, &c.	8 Property Account.
		£	£	£	£	£	£	£	£
10	Parr's B. C., *Ld.*, Wrgtn.	100,	48,	1,093,	1,241,	932,	76,	227,	6,
11	Manchr. County, *Lmtd.*.	600,	226,	2,963,	3,789,	3,756,	—	—	33,
12	Union of Manchr., *Lmd.*	417,	100,	885,	1,402,	1,189,	—	197,	16,
13	Bradford Bkg. Company	220,	235,	1,323,	1,778,		1,773,		5,
14	" Coml. J. S. Bk.	165,	123,	308,	596,		578,		18,
15	" Dist. Bk., *Lmd.*	195,	63,	335,	593,		586,		7,
16	" Old Bk., *Lmtd.*	386,	131,	733,	1,250,	1,054,	118,	58,	20,
17	Bank of Leeds, *Limited*	151,	22,	352,	526,	496,	—	20,	10,
18	Yorkshire Banking Co....	250,	67,	1,746,	2,063,	1,923,	100,	—	40,
19	Sheffield Bkg. Company	292,	97,	1,097,	1,486,		1,465,		21,
20	" and Hallamsh..	183,	53,	427,	663,		658,		5,
21	" and Rotherham	161,	79,	993,	1,233,		1,218,		15,
22	" Union...............	120,	23,	248,	391,		387,		4,
23	Burton, Uttoxeter, &c., Union	130,	59,	1,092,	1,281,	928,	347,		6,
24	Nottingham J. S. Bk., *Ld.*	79,	15,	472,	566,		560,		6,
25	Stamford, Spalding, &c., Banking Compy.	105,	67,	886,	1,058,	645,	218,	179,	16,
26	Staffdsh. J. S. Bk., *Lmtd.*	174,	45,	432,	651,	589,	14,	41,	7,
27	Lloyd's Bkg. Co., *Ld.*, Birmingham	305,	86,	2,549,	2,940,	2,593,	56,	249,	41,
28	Brmnghm. J. S. Bk., *Ld.*	204,	216,	1,225,	1,645,	1,303,	226,	98,	19,
29	" Bkg. Co., *Ld.*	109,	41,	839,	989,	832,	40,	94,	23,
30	" Town & Dist.	157,	28,	436,	621,	537,	37,	34,	14,
31	Dudley & W. Bromwich	85,	7,	560,	652,	533,	113,	—	7,
32	Wrcstr. City & Coty., *Ld.*	250,	107,	794,	1,150,	956,	55,	112,	28,
33	Bucks & Oxon Un., *Lmtd.*	80,	10,	522,	612,		600,		12,
34	W. of Eng. & S. Wales Dis.	750,	105,	2,726,	3,581,	2,912,	308,	276,	85,
35	Devon and Corn. Bkg. Co.	128,	66,	1,320,	1,514,		1,514,		
							11,751,		
	Totals	8,180,	3,055,	34,752,	45,989,	29,266,	1,602,	2,612,	762,

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* Half-year's profits. † This summation is arrived at by doubling the

for 1870, *with Analysis, Dividends, Prices, and Yield—Contd.*

9	10	11	12	13	14	15	16			
Analysis.										
Net Profits, less Charges. [00's omitted.]	Ratio per Cent. of Net Profits to Total Resources.	Government Securities, Cash, &c.	Ratio per Cent. of Government Securities, Cash, &c., to Liabilities to Public.	Dividend per Cent. per Annum.	Amount per Share Paid.	Market Price, January, 1871.	Yield per Cent. per Annum at Market Price.			Number.
£	Per cnt.	£	Per cnt.	Per cnt.			£	*s.*	*d.*	
32,7	$2\frac{5}{8}$	303,	28	8	10	18	4	8	10	10
41,9*	$2\frac{1}{4}$	—	—	9	15	24	5	12	6	11
44,7	$3\frac{1}{8}$	197,	22	$10\frac{3}{4}$	11	15	7	17	8	12
48,3	$2\frac{3}{4}$	72,	5	$22\frac{1}{2}$	40	119	7	11	3	13
28,2	$4\frac{3}{4}$	—	—	18	20	45	8	–	–	14
11,6*	4	—	—	6	30	40	4	10	–	15
21,0*	$3\frac{3}{8}$	176,	24	$11\frac{1}{4}$	20	37	6	1	7	16
12,5	$2\frac{3}{8}$	20,	5	5	25	22	5	13	7	17
32,6*	$3\frac{1}{8}$	100,	6	20	$12\frac{1}{2}$	39	6	8	2	18
38,1	$2\frac{5}{8}$	—	—	$12\frac{3}{4}$	140	255	7	–	–	19
21,3	$3\frac{1}{4}$	—	—	$11\frac{5}{8}$	25	44	6	12	1	20
31,2	$2\frac{1}{2}$	—	—	$16\frac{7}{8}$	32	72	7	10	–	21
15,0	4	—	—	$9\frac{3}{8}$	12	20	5	12	6	22
10,2*	$1\frac{5}{8}$	347,	31	14	10	23	6	1	8	23
8,0	$1\frac{3}{8}$	—	—	5	10	9	5	11	1	24
22,6	$2\frac{1}{8}$	397,	45	15	10	27	5	11	1	25
21,5	$3\frac{1}{4}$	55,	13	$7\frac{1}{2}$	20	21	7	2	10	26
24,0*	$1\frac{5}{8}$	305,	11	$12\frac{1}{2}$	$7\frac{1}{2}$	14	6	13	11	27
43,8	$2\frac{5}{8}$	323,	26	20	10	30	6	13	4	28
18,5	$1\frac{7}{8}$	134,	16	$6\frac{1}{4}$	5	10	3	2	6	29
15,7	$2\frac{1}{2}$	71,	16	$7\frac{1}{2}$	8	10	6	–	–	30
4,3	$\frac{5}{8}$	113,	20	5	10	6	8	6	8	31
13,1*	$2\frac{1}{4}$	166,	21	$10\frac{1}{2}$	$12\frac{1}{2}$	19	6	18	2	32
15,7	$2\frac{5}{8}$	—	—	$16\frac{1}{2}$	5	—	—			33
65,1	$1\frac{3}{4}$	584,	21	8	15	17	7	1	2	34
18,0	$1\frac{1}{4}$	—	—	$12\frac{1}{2}$	32	70	5	14	3	35
1,102,4†	Average $2\frac{2}{5}$	5,623,	Average 22	—	—	—	Average 6	7	2	

profit in the case of those banks in which it is given for the half-year only.

Table XLVII.—*Scottish Bank Balance*

[000's omitted in all money columns

Number.	Banks.	1 Date.	2 Liabilities. Paid-up Capital.	3 Reserve Fund and Balance Carried Forward.	4 Money Lodged.	5 Circulation of Notes.	6 Acceptances.	7 Total Resources.
			£	£	£	£	£	£
1	Bank of Scotland	Feb., 1866	1,000,	275,	7,159,	604,	199,	9,238,
	Central Bank of Scotland	'66	100,	55,	898,	50,	—	1,103,
	B. of Scotld. with Central	,, '70	1,000,	304,	8,227,	614,	947,	11,092,
2	Royal Bank of Scotland	Sept., 1865	2,000,	343,	8,128,	707,	200,*	11,378,
		,, '70	2,000,	437,	8,686,	673,	198,	11,994,
3	British Linen Company	April, 1866	1,000,	316,	7,322,	454,	382,	9,475,
		,, '70	1,000,	346,	7,283,	540,	293,	9,462,
4	Commercial Bank of Scotland	Nov., 1865	1,000,	275,	7,089,	697,	350,	9,411,
		,, '70	1,000,	362,	7,533,	709,	333,	9,937,
5	National Bank of Scotland	Dec., 1865	1,000,	313,	7,016,	679,	500,*	9,508,
		,, '70	1,000,	406,	8,282,	629,	1,119,	11,436,
6	Union Bank of Scotland	April, 1866	1,000,	259,	8,299,	686,	341,	10,584,
		,, '70	1,000,	374,	8,296,	620,	148,	10,439,
7	Clydesdale Banking Company....................	Dec., 1865	900,	304,	4,579,	408,	164,	6,355,
		,, '70	900,	339,	5,293,	484,	172,	7,189,
8	City of Glasgow Bank	June, 1866	870,	228,	4,956,	642,	564,	7,259,
		,, '70	870,	312,	6,109,	697,	667,	8,653,
9	Aberdeen Town and County Bank	Jan., 1866	156,	56,	1,401,	139,	—	1,752,
		,, '70	182,	25,	1,448,	153,	—	1,808,
10	North of Scotland Bank	Sept., 1865	280,	82,	1,716,	223,	—	2,300,
		,, '70	320,	57,	1,862,	276,	—	2,516,
11	Caledonian Banking Company....................	June, 1870	125,	43,	702,	70,	—	940,
		,, '70	125,	55,	741,	93,	—	1,015,
	Totals	1865–66	9,431,	2,549,	59,263,	5,359,	2,699,	79,302,
		'69–70	9,397,	3,018,	63,758,	5,488,	3,878,	85,540,

* Estimated.

Sheets for Years 1856-66 *and* 1869-70.

except No. 12, in which 00's are omitted.]

8	9	10	11	12	13	14	15	16	
Assets.				Analysis.					
Bills and Advances.	Government and other Securities.	Coin, Notes, &c.	Property Account.	Net Profits less Charges. [00's omitted.]	Ratio per Cent. of Net Profits to Total Resources.	Liabilities to Public.	Government Securities, Cash, &c.	Ratio per Cent. of Government Securities, Cash, &c., to Liabilities to Public.	Number.
£	£	£	£	£	Per cnt.	£	£		
6,317,	2,258,	532,	131,	128,6	$1\frac{3}{8}$	7,962,	2,790,	30	1
522,	510,	53,	18,	20,0	$1\frac{3}{4}$	948,	563,	—	
7,668,	2,775,	464,	186,	123,7	$1\frac{1}{8}$	9,788,	3,238,	33	
8,207,	2,565,	494,	112,	177,9	$1\frac{1}{2}$	9,035,	3,059,	34	2
8,486,	2,708,	686,	113,	175,6	$1\frac{3}{7}$	9,556,	3,394,	36	
6,362,	2,720,	270,	123,	131,4	$1\frac{3}{8}$	8,158,	2,990,	30	3
6,782,	2,160,	395,	124,	136,0	$1\frac{1}{2}$	8,116,	2,556,	34	
6,179,	2,622,	515,	95,	130,9	$1\frac{3}{7}$	8,137,	3,137,	39	4
7,090,	2,203,	532,	112,	152,1	$1\frac{4}{7}$	8,575,	2,735,	32	
6,737,	2,076,	593,	101,	132,1	$1\frac{3}{8}$	8,195,	2,669,	32	5
7,903,	2,905,	500,	128,	145,9	$1\frac{2}{7}$	10,030,	3,405,	34	
8,158,	1,413,	848,	165,	136,3	$1\frac{2}{7}$	9,325,	2,261,	24	6
7,766,	2,110,	406,	157,	135,6	$1\frac{1}{2}$	9,065,	2,516,	28	
5,163,	621,	475,	96,	112,1	$1\frac{3}{4}$	5,150,	1,095,	21	7
5,467,	1,043,	562,	116,	121,7	$1\frac{5}{7}$	5,949,	1,605,	29	
5,232,	1,182,	642,	202,	94,5	$1\frac{1}{4}$	6,161,	1,824,	29	8
6,236,	1,398,	803,	216,	94,2	$1\frac{1}{11}$	7,471,	2,201,	30	
1,343,	251,	132,	26,	27,9	$1\frac{1}{2}$	1,539,	383,	25	9
1,329,	276,	165,	38,	20,1	$1\frac{1}{8}$	1,600,	442,	25	
1,687,	610,		3,	35,7	$1\frac{1}{2}$	1,939,	610,	31	10
1,742,	501,	252,	21,	34,5	$1\frac{3}{8}$	2,139,	753,	35	
834,		89,	17,	17,0	$1\frac{3}{4}$	771,	89,†	—	11
676,	216,	100,	23,	17,2	$1\frac{5}{8}$	835,	316,	38	
55,908, 834,	16,218, 610,	4,642,	1,089,	1,144,8	Average 1·44	66,373,	20,906,	$31\frac{1}{2}$	
61,145,	18,295,	4,866,	1,232,	1,157,2	1·35	73,124,	23,161,	$31\frac{3}{8}$	

† Exact amount cannot be ascertained.

TABLE XLVIII.—*Scottish Banks. Dividend, Price, and Yield to Investor,* 1866 *and* 1870.

Banks.	Dividend, Price, and Yield.				
	Dividend per Cent. per Annum.	Amount per Share Paid.	Market Price.		Yield on Purchase Price, January, 1871.
			January, 1866.	January, 1871.	
		£ s.	£	£	£ s. d.
Bank of Scotland................	11	Stock	218	—	—
Central Bank of Scotland	12½	Stock	—	—	—
B. of Scotld. with Central	11½	—	—	270	4 8 10
Royal Bank of Scotland	7½	Stock	154	—	—
	8	—	—	180	4 8 10
British Linen Company	11	Stock	231	—	—
	12	—	—	267	4 17 9
Commercial Bank of Scotland	11	Stock	236	—	—
	14	—	—	282	4 19 6
National Bank of Scotland	11	Stock	220	—	—
	13	—	—	275	4 14 6
Union Bank of Scotland	9	Stock	190	—	—
	12	—	—	242	4 19 2
Clydesdale Banking Company	10	Stock	209½	—	—
	12	—	—	227	4 17 10
City of Glasgow Bank....	7	Stock	140	—	—
	9	—	—	189	4 15 2
Aberdeen Town and County Bank	10	6 –	13¼	—	—
	10	7 –	—	14	5 – –
North of Scotland Bank	10	3 10	7 18/	—	—
	10	4 –	—	8	5 – –
Caledonian Banking Company	10	2 10	5⅛	—	—
	12	—	—	6	5 – –
	Average				Average
Totals 1865–66	10	—	—	—	—
'69–70	11¼	—	—	—	4 16 6

V. WORKING EXPENSES—PROFITS—PRICE AND YIELD TO INVESTOR.

Charges or Working Expenses.

In dealing with the column for charges and the columns of ratios based upon it, we must remember that perfect accuracy of comparison is rendered impossible by diversity of practice on the part of various banks. Some pay their dividends free of income tax, and the tax on the dividend then swells the expenses, but the chief diversity doubtless arises in the matter of rent. If a bank owning its premises does not debit charges with rent, its current expenses will show an unduly favourable comparison with those of a bank which either pays rent or debits its charges account with an equivalent sum.

In the tables two ratios have been calculated in reference to charges—first, their ratio to net profits, and second, their ratio to liabilities to the public. A third is supplied below, viz., their ratio to total resources.

The Scotch banks have not been in the practice of stating charges in their balance sheets, but the total amount of their charges for 1874 was returned at 888,458*l.* to the Committee on Banks of Issue.

The Irish banks' return of charges supplied to the committee omits one bank of issue, and is comparatively valueless, as the aggregate liabilities of the banks making the return are not known. Only three of the five Irish banks whose balance sheets I have tabulated give their charges in their published statements. As two of these three are banks of non-issue, I am enabled to supply the charges of the third non-issuing bank from the return furnished to the Parliamentary Committee.

The returns of charges furnished to the Committee by thirty-six English joint stock banks of issue, and by forty-five English joint stock banks of non-issue, are valueless for purposes of comparison, because in neither case are the aggregate liabilities of these banks either stated in the evidence or otherwise ascertainable. If we might assume that the thirty-six issuing English banks whose charges are stated in the Appendix to the evidence, at pp. 554 and 555, showing a total of 424,369*l.*, were the same thirty-six banks whose total deposits Mr. Palgrave was enabled to return as 42,342,294*l.* (Appendix, No. 14, p. 548), the ratio of their charges to their deposits would appear as 1 per cent., and this, it will be seen, approximates very closely to the ratio shown below for the twenty country banks whose charges are stated in the accounts summarised in Tables XXVII and XXVIII.

The subjoined table (No. XLIX) compares charges proportionally with net profit less charges, with liabilities to public and with total resources.

TABLE XLIX.— *United Kingdom Joint Stock Banks; Ratios per Cent. of Charges or Working Expenses*, 1874.

Locality.	To Net Profits, less Charges.	To Liabilities to Public.	To Total Resources.
ENGLAND—	Per cnt.	Per cnt.	Per cnt.
Purely London—			
3 senior banks (no return for Union)	38·1	0·48	0·44
3 others	47·5	1·01	0·78
6 banks average	39·5	0·54	0·48
London and provincial—			
2 senior banks	92·8	1·14	1·06
5 others	74·0	1·60	1·30
7 banks average	88·7	1·22	1·10
Purely provincial, 20 banks	42·7	0·95	0·80
SCOTLAND—11 banks	62·2	0·96	0·84
IRELAND—4 banks	67·9	1·44	1·18

I find that generally the larger the number of branches, the higher are the expenses relatively to the ultimate net profit realised, and also that the ratio of expenses to liabilities to the public is smallest in those banks which show the largest average of liability at each office. This is precisely what might be expected. Where the rate of profit earned on the total resources is small, the expenses bear a correspondingly high ratio to the net profit earned.

Amongst the purely provincial English banks, the absolutely lowest ratio of expenses to liabilities to the public is 0·55 in the case of the Swaledale and Wensleydale Bank, a bank of issue. The highest ratio, excluding three exceptional banks, is 1·80, in the case of the Worcester City and County Bank, Limited.

Profits.

For some years past the "Economist" has published half-yearly analyses of the London joint stock bank balance sheets, and in order to arrive at the net business profit earned on the cash deposits, has deducted from the actual net profit earned 4 per cent. on the capital and reserve fund.

The *rationale* and *modus operandi* of the calculation are stated by the "Economist" as follows:—

> "The profits of banking are derived from two sources, first from the income obtained by the investment of the paid up capital and the reserve of undivided profits; and, secondly, from the profits arising from the employment of funds belonging to customers—that is to say, deposits and balances of current accounts—supplemented by commissions for agency business transacted for country and foreign banks, for acceptances given on behalf of customers and correspondents against securities of various kinds lodged by the parties as collateral guarantee. The first may be called investment, and the second, business profits. It is reasonable to suppose that the banks realise quite 4 per cent. per annum on the investment of their paid up capital and reserves, and if the amount representing this interest be deducted from the total sum which remains at credit of profit and loss, *after* providing for bad debts, for interest allowed on deposits and credit balances, for depreciation and repair of premises and property, for rebate on current bills held under discount, the figures which remain will of necessity represent the amount of profits yielded by the business apart from the investment of capital and reserves; and the most satisfactory mode of exhibiting the ultimate result will be by calculating the percentage of the business profits on the amount of the cash deposits. It is clear, for example, that a bank employing its deposits chiefly in the discount of bills of the highest class, in the purchase of securities of the most solid and most marketable character, and deriving but little profit for commissions on acceptances and credit, will exhibit a smaller *percentage* of profit on deposits than the case of banks managed on principles less rigid."

Now it seems to me that this calculation of net profit on cash deposits is entirely fallacious as a basis of comparison between bank and bank, unless it happens that the figures of the banks bear very nearly the same proportional relations to one another. If the calculation be applied to two banks the proprietors' funds of which are in one case 50 per cent., and in the other case 10 per cent. of the money lodged, the results will be very misleading. If the proprietors' funds are large relatively to the liabilities, they will naturally and legitimately be partially employed in the ordinary business of the bank, and will thus earn, on the average, more than 4 per cent., and whatever they earn beyond 4 per cent. would go to swell fallaciously the profits apparently earned on the deposits; whereas if the proprietors' funds are small relatively to liabilities they may earn considerably less than 4 per cent. overhead, and whatever they earn less than that rate would, on the "Economist's" basis of calculation, serve to diminish the rate apparently earned on cash deposits.

This fallacy in the "Economist's" system was completely overlooked by Mr. Charles Gairdner, one of the Scotch witnesses before the Committee on Banks of Issue, 1875, when he put in the following calculation:—

Percentage of net business profits :—

	£	*s.*	*d.*	
On cash deposits of 21 English provincial banks	1	13	2	per cent.
,, 11 Scotch banks	1	1	11	,,
Difference	−	11	3	,,

And from this difference, assuming the English provincial deposits at 200,000,000*l.*, he calculated there would be "a gain of 1,125,000*l.* "to the people of provincial England by the adoption of the Scotch "margin of banking profit." Mr. Gairdner omitted the working expenses from his calculation, but this is immaterial, as it is found by Table XLIX that they bear very nearly the same ratio to liabilities in provincial England as in Scotland; but it was a most unwarrantable straining of the "Economist's" mode of calculation to treat its results as an index of the comparative cost of banking to the public; and it was pertinently pointed out by Mr. Rae in his evidence, that as all the Scotch banks are bound by one scale of interest, discount, and charges, the very return upon which Mr. Gairdner's estimate was based exposed the fallacy of his reasoning, for it showed the net profit on deposits of the British Linen Company to be 1*l.* 7*s.* 10*d.* per cent., whilst that of the City of Glasgow Bank was only 17*s.* 2*d.* per cent. a difference of 10*s.* 8*d.* per cent. between two banks whose terms of business to the public are identical.

I have not adopted the "Economist's" basis of calculation, because it would be misleading when applied to banks differing widely in position and characteristics.

Ratio of Net Profits to Total Resources.

Believing the best test of a bank's annual profits to be the ratio they bear to the total resources employed in its business, I have calculated that ratio in the various tables; but it must not be supposed that the rate of profit affords any reliable index to the comparative cost of banking to the public.

It will be interesting to compare the annual ratio as shown by the joint stock banks of the different districts :—

Locality of Banks.	Number of Banks.	Rate of Net Profit on Total Resources.
		Per cnt.
Purely London	7	1·22
London and provincial	7	1·24
Purely provincial	49	2·07
Scotch	11	1·35
Irish	5	1·66

Amongst the London banks the absolutely highest rate of profit is 1·92, shown by the Alliance Bank, and the lowest ·84, shown by the City Bank.

The three senior banks show great equality in the rate of their profit, viz., 1·2 per cent.

Amongst the London and provincial banks the absolutely highest rate of profit, 2·09 per cent., is shown by the Consolidated Bank.

Amongst the purely provincial English banks, the lowest rate of profit earned on the resources is 1·44, for the North and South Wales Bank and the Hampshire Banking Company, and the highest, 4·22, for the Bradford Commercial Banking Company, Limited. The rate of the Manchester and Liverpool District Bank, the largest of the purely provincial banks, is 1·5 per cent.

The rate of profit earned on the total resources will naturally be modified by local circumstances, but, speaking generally, we may expect it to depend in a great measure on (1) the character and activity of the business, (2) the proportion of proprietors' funds to liabilities to the public, (3) the proportion of the resources held in cash or in a readily convertible shape, and (4) the working expenses.

Where rediscounting customers' bills is practised, the rate of profit will necessarily be increased. Where the proprietors' funds are large relatively to the money lodged, the profits should be correspondingly enhanced. On the other hand, where large reserves are held at unremunerative rates, the rate of profit must necessarily be diminished. Where not only all the proprietors' funds, but also a considerable proportion of the money lodged, are held in cash and low-interest-bearing securities, the profit will be comparatively smaller than where not only all the money lodged, but likewise a portion of the proprietors' funds, are employed at a banking profit in accommodating the customers with discounts and advances.

The working expenses naturally tend to increase with the number of branches.

Table L places in juxtaposition the net profit earned on the total resources, the ratio of proprietors' funds to liabilities to public, the ratio of cash and surplus funds to liabilities to public and to proprietors' funds, and the number of branches and sub-branches, in the case of the London and provincial and purely provincial English joint stock banks.

TABLE L.—*London and Provincial and Purely Provincial English Joint Stock Banks; Rate of Profit Earned*, 1874.

Number.	London and Provincial and Purely Provincial English Banks. [Banks of Issue in *Italics*.]	Rate of Net Profit earned on Total Resources.	Number of Branches and Sub-Branches.	Ratio of Proprietors' Funds to Liabilities to Public.	Ratio of Cash and Surplus Funds to Liabilities to Public.	Ratio per Cent. of Cash and Surplus Funds to Proprietors' Funds.
	LONDON AND PROVINCIAL.	Per cnt.	No.	Per cnt.	Per cnt.	Per cnt.
1	National Provincial Bank of England	1·28	137	9·0	42·4	471
2	London and County Bank	1·00	148	8·9	33·2	371
3	Consolidated Bank, *Limited*	2·09	3	27·3	30·6	111
4	Midland Banking Company, *Limited*	1·62	27	24·1	16·0	66
5	London and South-Western Bk., *Limd.*	1·48	26	19·6	28·4	144
6	,, Provincial Bank, *Limited*	1·46	54	13·6	42·3	310
7	* ,, Yorkshire Bank, *Limited*	0·88	10	29·4	14·1	48
	PURELY PROVINCIAL.					
	I. Cumberland and Northumberland.					
1	*Carlisle and Cumberland Bank*	2·28	5	28·0	—	—
2	*Cumberland Union Bkg. Co., Limited*	2·10	17	16·6	26·2	158
3	*Carlisle City and District Bank*	2·50	4	25·4	—	—
4	*Bank of Whitehaven, Limited*	2·21	3	30·5	14·4	47
5	*North-Eastern Bank, *Limited*	1·80	16	107·3	27·9	26
	II. Liverpool.					
6	*Adelphi Bank, *Limited*	3·02	1	71·7	17·8	25
7	Liverpool Commercial Bkg. Co., *Lmtd.*	2·45	0	45·2	7·4	16
8	,, Union Bank	2·17	0	22·8	33·7	147
9	National Bank of Liverpool, *Limited*	2·94	2	82·0	16·3	20
10	North-Western Bank, *Limited*	2·04	0	37·4	10·4	28
11	North and South Wales Bank	1·44	36	14·8	30·7	207
	III. Manchester District.					
12	Manchester and Liverpool District	1·50	51	11·7	33·9	290
13	,, County Bank, *Limited*	1·90	26	17·4	—	—
14	Union Bank of Manchester, *Limited*	2·90	20	32·6	14·0	43
15	*Lancashire and Yorkshire, *Limited*	2·14	8	45·4	24·4	53
16	Manchester Joint Stock Bank, *Limited*	2.92	1	43·3	—	—
17	Parr's Banking Company, *Limited*	2·09	16	12·9	48·2	373
	IV. Yorkshire.					
18	*Swaledale and Wensleydale Bkg. Co.*	1·78	3	12·1	29·4	243
19	*Bradford Banking Company*	2·51	0	31·7	—	—
20	,, *Comml. Joint Stock Bank*	4·22	0	60·5	—	—
21	Bradford District Bank, *Limited*	3·08	1	47·4	—	—
22	,, Old Bank, *Limited*	3·25	2	45·5	—	—
23	Bank of Leeds, *Limited*	2·27	0	45·8	7·7	11½
24	*Halifax Comml. Banking Co., Limited*	2·92	1	47·7	—	—
25	*Yorkshire Banking Company*	3·05	21	15·5	—	—
26	*Sheffield Banking Company*	2·77	3	26·8	—	—
27	,, *and Hallamshire Bank*	3·44	0	41·8	—	—
28	,, *and Rotherham Bank*	1·63	4	14·8	—	—
29	Sheffield Union Banking Company	3·33	3	50·2	—	—

* For note see next page.

TABLE I.—*London and Provincial and Purely Provincial English Banks.—Contd.*

Number.	London and Provincial and Purely Provincial English Banks. [Banks of Issue in *Italics*.]	Rate of Net Profit earned on Total Resources.	Number of Branches and Sub-Branches.	Ratio of Proprietors' Funds to Liabilities to Public.	Ratio of Cash and Surplus Funds to Liabilities to Public.	Ratio per Cent. of Cash and Surplus Funds to Proprietors' Funds.
	V. Derby, Notts, &c.	Per cnt.	No.	Per cnt.	Per cnt.	Per cnt.
30	*Burton, Uttoxeter, &c., Union Bank*	1·89	2	15·9	—	—
31	Nottingham Joint Stock Bank, *Limited*	1·52	5	22·2	—	—
32	*Stamford, Spalding, and Boston Bank*	2·01	18	23·1	47·3	204
33	*Leicestershire Banking Company*	2·13	10	24·1	35·3	147
	VI. Black Country.					
34	Staffordshire Joint St. Bank, *Limited*	2·29	7	34·3	17·1	50
35	County of Stafford Bank	2·38	0	22·5	25·8	114
36	Lloyd's Banking Company, *Limited*	1·61	35	9·6	—	—
37	Birmingham Joint Stock Bank, *Limited*	2·37	2	25·9	23·8	92
38	„ Bkg. Company, *Limited*	2·21	1	24·7	25·8	104
39	„ Town and District Bank	2·62	7	23·4	11·7	50
40	*Wolverhampton and Staffordshire*	1·49	0	15·8	—	—
	VII. W. and S. Counties.					
41	*Stourbridge and Kidderminster Bank*	2·16	13	15·8	25·7	163
42	*Worcester City and County, Limited*	2·42	13	34·3	22·2	64
43	Bucks and Oxon Union Bank, *Limited*	2·26	8	14·0	—	—
44	*W. of Engld. and S. Wales Dist. Bank*	2.33	42	19·9	20·4	102
45	Devon and Cornwall Banking Comp.	1·45	14	12·6	—	—
46	*Three Towns Banking Co., *Limited*	2·67	0	109·9	9·3	8½
47	*Wilts and Dorset Banking Company*	1·55	49	12·8	62·2	485
48	Hampshire Banking Company	1·44	29	9·0	39·5	438
49	*North Kent Bank, *Limited*	1·82	1	29·9	13·7	46

* Banks indicated thus are exceptional, either in consequence of their recent establishment, or of the small extent of their business.

In this, as in the other tables, the names of the banks of issue are printed in italics. On comparing their rate of profit with that of the non-issuing banks, I cannot find that the results are much, if at all, different.

The National Provincial Bank and the London and County earn net profits of 1·28 and 1 per cent. respectively, with very small proportions of proprietors' funds, a very large number of branches, and handsome proportions of cash and other reserves.

Amongst the Cumberland banks the smallest rate of profit on total resources is earned by the Cumberland Union Bank, whose cash and surplus funds exceed its proprietors' funds by 58 per cent.

Amongst the purely Liverpool banks the highest rate of profit is earned by the National Bank, with the highest ratio of proprietors' funds, and a moderate reserve of cash and surplus funds.

Amongst the banks of the Manchester district, the lowest rate of profit (1½ per cent.) is earned by the Manchester and Liverpool District Bank, with the smallest ratio of capital to liabilities, a large number of branches, and large cash and other reserves, of which a great proportion is in English Government securities, yielding of course a comparatively feeble profit; whilst the highest rate of profit (2·9 per cent.) is earned by the Union Bank of Manchester, with a large proportion of proprietors' funds, and apparently small proportions of cash and other reserves.

The Yorkshire banks generally present by far the highest rate of net profit, along with such very large proportions of proprietors' funds, as go far to account for their exceptionally high return. The highest rate of profit in this group, and indeed in the whole table, is earned by the Bradford Commercial Joint Stock Bank, with the unusually large ratio of 60½ per cent. of proprietors' funds to liabilities to the public. The smallest rate of profit but one in the group is earned by the Swaledale and Wensleydale Banking Company, with a moderate ratio of proprietors' funds to liabilities to the public, and very handsome proportions of cash and reserves. The Yorkshire banks, as a rule, do not state their cash and reserves, and the very high rates of profit which in many cases their resources yield, though no doubt accounted for, to some extent, by the generally high proportion of their proprietors' funds and by the great activity of trade in the district, suggest the inference that in these cases the reserves employed at unremunerative rates are small, and that in some instances the profits may be enhanced by recourse to the practice of rediscounting. None of them, except the Yorkshire Banking Company, have numerous branches.

Amongst the black country banks, Lloyd's Banking Company, Limited, with by far the smallest ratio of capital, and by far the greatest number of branches, shows all but the smallest rate of profit.

Amongst the banks of the western and southern counties, omitting two exceptional instances, the highest rate of profit is shown by the Worcester City and County Bank, with the highest ratio of proprietors' funds, whilst the lowest rate of profit is shown by the Hampshire Banking Company, with the smallest ratio of proprietors' funds, twenty-nine branches, and a very goodly proportion of reserves. Similarly the small return of 1·55 per cent. of profit shown by the Wilts and Dorset Bank, is doubtless due to its moderate ratio of proprietors' funds, 13 per cent., its numerous branches, forty-nine, and its enormous ratio of cash and reserves, 62 per cent. to liabilities to public, and no less than 485 per cent. to proprietors' funds.

TABLE LI.—*Scotch and Irish Joint Stock Banks, Rate of Profit Earned*, 1874.

Banks.	Rate of Net Profit on Total Resources.	Number of Branches and Sub-Branches.	Ratio of Proprietors' Funds to Liabilities to Public.	Ratio of Cash and Surplus Funds to Liabilities to Public.	Ratio of Cash and Surplus Funds to Proprietors' Funds.
SCOTCH BANKS.	Per cnt.	No.	Per cnt.	Per cnt.	Per cnt.
1. Bank of Scotland	1·22	76	10·8	30·5	282
2. Royal	1·41	106	21·3	31·7	148
3. British Linen Co.	1·58	67	15·5	30·5	197
4. Commercial	1·39	100	13·0	32·2	248
5. National	1·29	91	11·0	28·2	249
6. Union	1·30	116	12·8	32·5	254
7. Clydesdale	1·56	79	19·4	34·6	178
8. City of Glasgow	1·12	122	14·2	27·8	195
9. Aberdeen Town and Cy.	1·42	38	18·1	24·0	134
10. North of Scotland	1·37	46	14·6	32·1	220
11. Caledonian	1·38	21	16·2	37·0	230
Averages	1·35	76	14·6	30·8	211
IRISH BANKS.					
1. Hibernian	2·42	31	44·3	11·4	26
2. Munster, *Limited*	1·47	39	21·1	16·9	80
3. *National*	1·62	112	16·7	42·6	255
4. Royal	2·02	4	27·4	25·7	93
5. *Ulster*	1·26	43	14·6	25·8	177
Averages	1·66	46	20·2	32·0	158

That there should not be so much variation of the rate of profit amongst the Scotch banks as amongst the English provincial banks, is quite to be expected from the similarity of the characteristics and local circumstances of the former. The highest rates of profit are 1·58 and 1·56, shown by the British Linen Company and the Clydesdale, whilst the lowest rates are 1·12 and 1·22, shown by the City of Glasgow Bank and the Bank of Scotland.

In Ireland the highest rate of profit is 2·42 per cent., shown by the Hibernian Bank, which has a very large proportion of proprietors' funds relatively to liabilities to public; and the lowest rate of profit is 1·26, shown by the Ulster Bank.

The following table compares the rate of net profit earned on the total resources in the various territorial divisions collating the principal conditions by which it is modified :—

Table LII.—*United Kingdom Joint Stock Banks. Rate of Net Profit on Total Resources, and the Features which tend to Modify the same.*

Joint Stock Banks.	Ratio of Net Profit to Total Resources.	Ratio of Proprietors' Funds to Liabilities to Public.	Average Number of Offices per Bank.	Average Amount per Office of Liabilities to Public. [000's omitted.]	Ratio of Cash and Surplus Funds to Liabilities to Public.	Ratio of Cash and Surplus Funds to Proprietors' Funds.	Ratio per Cent. of Working Expenses to Total Resources.
	Per cnt.	Per cnt.	No.	£	Per cnt.	Per cnt.	Per cnt.
England—							
Purely London	1·22	11·0	5	2,475,	26·2	238	0·48
London and provincial	1·24	10·9	59	135,	36·7	335	1·10
Purely provincial .	2·07	21·1	11	148,	30·9	148	0·80
Scotland	1·35	14·6	79	106,*	30·8	211	0·84
Ireland	1·66	20·2	47	100,	32·0	158	1·18

* Taking the figures shown in Table LXXVII, Progress of Scotch Banking, the average liability to public per office would be 101,000*l.*

In the case of the London banks the large average liability per office, and the consequently small ratio of working expenses, should enhance the profit, whilst the small ratio of proprietors' funds to liabilities to the public depresses it. The profit of the London and provincial banks is depressed by their large proportions of cash and surplus funds to liabilities to the public, by their comparatively high rate of working expenses, and by the small proportion of their proprietors' funds to their liabilities.

The profit of the purely provincial English banks shows the highest rate of all, which is accounted for in great measure by the larger proportion of their proprietors' funds, and their satisfactory average liability per office as compared with the Scotch and Irish figures. The average sustains also a very appreciable increase from the enhanced rate of profit earned by those banks which rediscount their customers' bills. The English provincial working expenses compare most favourably with the Scotch, when it is considerd that the scale of salaries is very appreciably higher in England than in Scotland.

The Scotch working expenses are, indeed, singularly low, when the enormous extension of their system of branches is considered. It may be estimated that so far as the public are concerned, some 400 of their branches are superfluous. Reckoning the average cost of these at the low rate of 600*l.* per office, it would appear that the total cost to the banks of their superfluous offices amounts to 240,000*l.* per annum, which if added to their profit for 1874, would bring the rate of that profit on the total resources to 1·58 per cent. The large sums very prudently held by the Scotch banks in

English Government securities tends to depress the rate of profit which they earn.

Market Price and Yield to Investors.

The market price of bank shares and their yield to the investor are regulated by a variety of circumstances:—

1st. Public opinion as to the safety of the bank, the nature of its business, and the soundness of its management.

2nd. The amount of reserve fund which is designed to protect the proprietors against great fluctuations of dividend and possible loss of capital.

3rd. The actual amount of dividend and bonus paid.

4th. The prospects of increased dividend. If the actual amount of the profits much exceeds the amount of the dividend and bonus paid, investors are encouraged to expect an increased distribution, and this expectation is discounted in the market price.

5th. In the case of recently established banks, the market price naturally represents the dividends expected rather than those realised.

Table LIII is designed to illustrate some of these points.

TABLE LIII.—*London and Provincial and Purely Provincial English Joint Stock Banks; Profit, Dividend, Price, and Yield per Cent. to Investor, January,* 1875.

	London and Provincial and Purely Provincial English Banks. [Banks of Issue in *Italics*.]	Ratio per Cent. of Reserve Fund to Paid-up Capital.	Profit per Cent. per Annum on Paid-up Capital.	Dividend and Bonus per Cent. per Annum.	Premium per Cent. of Shares in Market, January, 1875.	Yield per Cent. Per Annum at Market Price.		
	LONDON AND PROVINCIAL.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	£	*s.*	*d.*
1	National Provincial Bank of England	57	24·4	23	300	5	15	–
2	London and County Bank	52	18·6	20	228¾	6	1	8
3	Consolidated Bank, *Limited*	15	11·2	10	72	5	16	4
4	Midland Banking Company, *Limited*	15	9·6	9	37½	6	10	11
5	London and S.-Western Bank, *Limd.*	8	9·8	7½	12½	6	13	4
6	" Provincial Bank, *Limited*	20	14·7	10	65	6	1	3
7	* " Yorkshire "	2	4·0	4	discount	6	–	–
	PURELY PROVINCIAL. **I. Cumberland and Northumberland.**							
1	*Carlisle and Cumberland Bank*	138	25·0	22	297½	5	10	8
2	*Cumberland Union Bkg. Co., Limited*	37	20·3	18	220	5	12	6
3	*Carlisle City and District Bank*	113	26·6	20	252	5	13	7
4	*Bank of Whitehaven, Limited*	93	18·3	20	285	5	3	10
5	*North-Eastern Bank, *Limited*	31	4·6	5⅕	12½	4	12	5
	II. Liverpool Banks.							
6	*Adelphi Bank, *Limited*	4	7·5	5	discount	5	11	1
7	Liverpool Commercial Bank, *Limited*	58	12·5	12½	80	6	18	10
8	" Union Bank	27	14·9	10	45	6	17	11
9	National Bank of Liverpool, *Limited*	20	7·9	6⅔	8⅓	6	3	1
10	North-Western Bank, *Limited*	25	9·4	7	30	5	7	8
11	*North and South Wales Bank*	55	17·3	20	210	6	9	–

* For note see next page.

Table LIII.—*London and Provincial and Purely Provincial English Banks.—Contd.*

	London and Provincial and Purely Provincial English Banks. [Banks of Issue in *Italics*.]	Ratio per Cent. of Reserve Fund to Paid-up Capital.	Profit per Cent. per Annum on Paid-up Capital.	Dividend and Bonus per Cent. per Annum.	Premium per Cent. of Shares in Market, January, 1875.	Yield per Cent. per Annum at Market Price.		
	III. Manchester District.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	£	*s.*	*d.*
12	Manchester and Liverpool District....	63	23·3	20	255	5	12	8
13	,, County Bank, *Limited*	53	18·2	15	180	5	7	1
14	Union Bank of Manchester, *Limited* ..	30	15·3	$11\frac{1}{3}$	$94\frac{1}{3}$	5	16	7
15	*Lancashire and Yorksh. Bank, *Limited*	14	7·8	6	35	4	8	10
16	Manchester Joint Stock Bank, *Limited*	21	6·0	10	$87\frac{1}{2}$	5	6	8
17	Parr's Banking Company, *Limited*	29	23·7	15	$162\frac{1}{2}$	5	14	3
	IV. Yorkshire.							
18	*Swaledale and Wensleydale Bkg. Co.*	52	25·2	20 {	Shares very rarely change hands.			
19	*Bradford Banking Company*...............	65	17·7	25	285	6	9	10
20	,, *Commcl. Joint Stock Bank*	84	20·7	18	$192\frac{1}{2}$	6	3	1
21	Bradford District Bank, *Limited*	50	14·2	$10\frac{1}{2}$	$104\frac{2}{7}$	5	2	10
22	,, Old ,, ...	35	14·0	$13\frac{3}{4}$	150	5	10	–
23	Bank of Leeds, *Limited*	28	9·2	7	27	5	10	3
24	*Halifax Commercial Bkg. Co., Limited*	59	14·2	14	$138\frac{7}{8}$	5	17	3
25	*Yorkshire Banking Company*	59	36·1	24	300	6	–	–
26	*Sheffield* ,, ...	36	18·0	17	$95\frac{5}{7}$	8	13	8
27	,, *and Hallamshire Bank*	30	15·2	15	99	7	10	9
28	,, ,, *Rotherham Bank*	53	19·5	$18\frac{3}{4}$	161	7	3	8
29	Sheffield Union Banking Company	28	12·7	$12\frac{1}{2}$	75	7	2	10
	V. Derby, Notts, &c.							
30	*Burton, Uttoxeter, &c., Union Bank*...	53	21·1	20	170	7	8	2
31	Nottingham Joint Stock Bank, *Limited*	34	11·2	$8\frac{1}{2}$	50	5	13	4
32	*Stamford, Spalding, and Boston*	51	16·2	17	$236\frac{1}{4}$	5	1	1
33	*Leicestershire Banking Company*	36	15·0	$13\frac{3}{4}$	125	6	2	2
	VI. Black Country.							
34	Staffordshire J. Stock Bank, *Limited*	35	12·1	$8\frac{3}{4}$	$41\frac{1}{4}$	6	3	11
35	*County of Stafford Bank*	58	20·5	18	220	5	12	6
36	Lloyd's Banking Company, *Limited*	37	25·2	20	$262\frac{1}{2}$	5	10	4
37	Birmingham Town and Dist. Bk., *Lim.*	107	23·9	20	240	5	17	7
38	,, J. Stock Bank, *Limited*	78	19·9	$13\frac{3}{4}$	200	4	11	8
39	,, Bkg. Company, *Limited*	38	19·1	$11\frac{1}{4}$	$103\frac{1}{8}$	5	10	8
40	*Wolverhampton and Staffordshire*	41	15·5	10	80	5	11	1
	VII. W. and S. Counties.							
41	*Stourbridge and Kidderminster*...........	86	29·5	20	150	8	–	–
42	*Worcester City and Coty. Bk. Co., Ltd.*	41	13·3	$12\frac{2}{5}$	102	6	2	9
43	Bucks and Oxon Union Bank, *Limited*	23	22·6	20	250	5	14	3
44	*W. of Engld. and S. Wales Dist. Bank*	20	16·8	14	$123\frac{1}{3}$	6	5	4
45	Devon and Cornwall Bkg. Company....	68	21·7	$16\frac{1}{2}$	$134\frac{3}{8}$	7	–	9
46	Three Towns Bkg. Company, *Limited*	2	5·2	5	discount		—	
47	*Wilts and Dorset Banking Company*..	62	22·1	22	300	5	10	–
48	Hampshire Banking Company	27	22·2	13	130	5	13	–
49	*North Kent Bank, *Limited*....................	7	8·5	8	par	8	–	–

* Banks indicated thus are exceptional, either in consequence of their recent establishment, or of the small extent of their business.

VI. ATTEMPTED ESTIMATE OF TOTAL BANKING LIABILITIES AND ASSETS OF THE UNITED KINGDOM.

Liabilities already Ascertained, and those Remaining to be Estimated.

The tables give substantially the capital and liabilities of all the London banks, of all the London and provincial banks, of all the Scotch banks, of forty-nine out of ninety-seven English purely provincial banks, and of five out of nine Irish banks. The aggregate deposits of all the Irish banks are given by Dr. Hancock, from figures furnished to him by the various banks, as 31,700,000*l.* at 31st December, 1874. The average Irish circulation of the four weeks ending 26th December, 1874, was 7,151,000*l.*, making the total liabilities to the public of the Irish banks 38,851,000*l.* If, therefore, we can estimate the liabilities of the forty-seven English purely provincial banks, whose balance-sheets we have not had access to, and of the private banks, provincial and London, we shall be in a position to attain an approximate estimate of the grand total of the banking liabilities of the United Kingdom.

Purely Provincial English Joint Stock Banks.

The forty-nine English purely provincial joint stock banks in Table XXVII show paid-up capital 11,940,000*l.*, liabilities to public 81,404,000*l.*

Other forty-four English purely provincial banks are known to have a paid-up capital of 7,422,400*l.*, and estimating them to have liabilities in the aggregate in the same proportion to paid-up capital as the forty-nine banks whose liabilities are ascertained, the amount of their liabilities would be 50,600,000*l.* There are three other banks whose capital is not stated, and whose liabilities we cannot estimate at more than 1,000,000*l.*

This gives an aggregate liability to the public for the purely provincial joint stock banks of 133,000,000*l.*

The calculation may be verified by other methods, thus:—

The forty-nine purely provincial banks in Table XXVII show five hundred and forty-nine offices, with aggregate liabilities to the public of 81,403,700*l.*, or 148,000*l.* per office. At the same rate per office, the other two hundred and seventy-four offices of the English provincial joint stock banks should show an aggregate liability to the public of 40,600,000*l.*, making a total for the English purely provincial banks of 122,000,000*l.* against 132,000,000*l.*, found by the calculation based on the capital.

But this calculation calls for some rectification. The 49 banks with 549 offices, show an averge of 11⅕ offices per bank, whilst the remaining 48, or really 47 banks, as one does not do banking business, having 273 offices, show an average of 5¾ offices per bank. It is found generally that the fewer the offices per bank the larger the liabilities per office. Amongst the 49 banks whose liabilities are ascertained, the 25 which have fewer than 6 offices per bank, show an average liability per office of 400,000*l.* Deducting from these the 7 largest with 1 office each, the average liability of the remaining banks is 270,000*l.* per office. If the average liability per office of the 47 banks whose liabilities we seek to estimate were taken at 250,000*l.* per office, the total would be 68,000,000*l.*, which added to the ascertained liabilities of 49 banks, would yield a total for the 96 banks of 150,000,000*l.*

Again, calculating roughly by the number of banks:—

			£
	49	show liabilities of	81,400,000
Deduct the	5	largest with liabilities of	31,900,000
Leaving	44	with liabilities of	49,500,000
	47	In the same ratio per bank would have liabilities of	53,000,000
Making	96	with liabilities of	134,400,000

Let us see how far these conclusions are verified by the figures published in the Appendix (No. 18) to the evidence given to the Banks of Issue Committee, 1875. The table there given I have here reprinted.

TABLE LIV.—*United Kingdom Joint Stock and Private Banks. Returns of Capital and Deposits supplied to Committee on Banks of Issue—Session* 1875.

[Reprinted from Appendix No. 18 to the Committee's Report and Evidence.]

Banks.	Number.	Returns.		Capital.	
		Sent.	Not Sent.	Subscribed.	Paid-up.
				£	£
London banks—					
Joint stock	29*	19	10	37,723,600	13,805,074
Private	60†	19	41	—	—
Total London banks.	89	38	51	37,723,600	13,805,074
Country banks—					
Joint stock, England	99	88	11	60,329,805	13,750,257
,, Scotland	12	11	1	—	9,697,000
,, Ireland	9	8	1	8,000,000	5,190,000
Private, England	189	143	46	—	—
,, Ireland	3	—	3	—	—
Total country banks.	312	248	64	68,329,805	28,637,257
Grand totals	401	286	115	106,053,405	42,442,331

* This number evidently includes discount companies and London and provincial banks.

† This number includes bill brokers, and other houses not properly speaking bankers.

TABLE LIV.— *United Kingdom Joint Stock and Private Banks—Contd.*

Banks.	Rest or Reserve of Undivided Profits.	Deposits.		
		From Public.	From Banks.	Total.
	£	£	£	£
London banks—				
Joint stock	4,033,410	108,235,092	6,623,366	114,858,458
Private	—	31,803,561	7,164,820	38,968,381
Total London banks.	4,033,410	140,038,653	13,788,653	153,826,839
Country banks—				
Joint stock, England	8,942,418	118,053,863	1,708,617	119,762,480
,, Scotland	1,134,000	—	—	78,401,000
,, Ireland	2,326,135	31,781,747	296,125	32,077,872
Private, England	—	60,525,661	147,806	60,673,467
,, Ireland	—	—	—	—
Total country banks.	12,402,553	210,361,271	2,152,548	290,914,819
Grand totals	16,435,963	350,399,924	15,940,734	444,741,658

Note.—This return must be looked upon as to some extent conjectural, as the missing Irish returns may possibly have been sent in anonymously and posted in England, so that the postmark would give no indication of their origin.

The total deposits of eighty-eight of the English country joint stock banks are here shown to be 119,762,480*l.*, or an average of 1,360,000*l.* per bank. Eleven banks gave no return, but as we have found the total number of English purely provincial joint stock banks to be ninety-seven in 1874 (not ninety-nine, as stated in the Committee's return), and as one of these was ascertained to exist only as a bank of issue, I will calculate the remaining eight, at the same rate per bank as those which furnished figures to the chairman of the Committee, though this may be rather an over estimate. The calculation will then stand thus:—

England and Wales Joint Stock Country Banks, 1874.

	£
Ascertained deposits of 88 banks	119,762,000
Estimated, at same rate per bank, 8 banks	10,890,000
Circulation of 54 banks	2,276,000
Acceptances	2,100,000
Total estimated liabilities to public	135,028,000

These figures amply confirm the calculations already arrived at, quite independently, by the present inquiry; and I adopt

134,000,000*l.* as my estimate of the liabilities to the public of the purely provincial English joint stock banks.

English Provincial Private Banks.

The calculation by offices enables us to attempt an approximate estimate of the liabilities of the private bankers in the provinces. I have stated the number of the offices of the private banks in the English provinces as five hundred and twenty-three. As the number of the offices of these private banks per bank is only two and three-quarters as against eight and a-half offices per bank in the case of the purely provincial joint stock banks, and as we find that in the joint stock banks which have not more than three branches the average liability to the public per office is 436,000*l.*, I confess I should have thought it quite possible that the average liabilities of the private country banks might be reckoned as high as 250,000*l.* per office; but this estimate so very much exceeded that of Mr. Palgrave for 1871, viz., an average of 130,000*l.* per office for capital and deposits of all the country banks, joint stock and private, that I at once decided to reject it, and preferred to assume the average liability per office of the private banks to be only a little more than that of the joint stock banks, or say 160,000*l.* per office. This would yield a total liability to the public for the private country banks of 84,000,000*l.*

I have endeavoured to verify this approximation by a calculation based on the amount of note issues. From Mr. Palgrave's valuable evidence of 1875, it appeared that in thirty-six joint stock banks of issue the proportion of circulation to deposits was 4 per cent. in 1874. The average circulation of the one hundred and sixteen private banks of issue was in 1874 2,600,000*l.* If the note circulation were 5 per cent. of their deposits, the latter would show a total of 52,000,000*l.* or 450,000*l.* per bank. At the same rate per bank, the money lodged of the eighty private country banks of non-issue would show a total of 36,000,000*l.*, and the calculation would stand thus:—

England and Wales Private Country Banks, 1874.

	£
116 issuers—circulation	2,600,000
,, money lodged	52,000,000
80 non-issuers	36,000,000
Total	90,600,000

The table of the Committee on Banks of Issue furnishes another and a surer means of testing the estimate of the liabilities of the private country banks. It gives the number of private provincial banks as one hundred and eighty-nine, I make them one hundred and ninety-six. It gives the deposits of one hundred and forty-three as 60,673,467*l.*, which is equal to an average of 424,000*l.* per bank. Reckoning the deposits of the remaining fifty-three at the same rate, they should amount in the aggregate to 22,472,000*l.*, and the account would stand thus:—

England and Wales Private Country Banks, 1874.

	£
Ascertained deposits—143 banks	60,673,000
Estimated ,, 53 ,, ...	22,472,000
Note circulation	2,540,000
Total estimated liabilities	85,685,000

Here again my own independent estimates are strikingly confirmed by the statistics furnished to the chairman of the Committee. I adopt therefore 85,000,000*l.* as a reasonable estimate of the liabilities to the public of the private country bankers.

London Private Banks.

Following the "Banking Almanac," I have in Table VIII set down the number of London private bankers as fifty-five, but the list will be found to include many houses which are bill-brokers, exchange and bullion dealers, or merchants, and I find on sifting it that there are in the city fourteen, and in the west end twelve, private bankers strictly so called. After inquiry and reflection, I estimate their money lodged at 60,000,000*l.*, their acceptances at 10,000,000*l.*, and the proprietors' capital employed in their business at 10,000,000*l.*, equal to a total of 80,000,000*l.*, as against Mr. Palgrave's estimate for 1871, endorsed by Mr. Newmarch, of 75½ millions. (See "Notes on Banking," by R. H. Inglis Palgrave; London, John Murray, 1873, p. 2.) Mr. Palgrave stated this as an under estimate, and there must have been some increase of money lodged with the private banks, as we have found there has been with the joint stock banks since 1871. Mr. Richard Seyd, in his instructive "Estimates of Amounts of Capital engaged in the "City of London Wholesale and International Commerce," sets down the capital of twenty-two London private bankers as 15,000,000*l.*, and their deposits as 90,000,000*l.*; but the latter sum seems to be quite an over-estimate.

The table of the Committee on Banks of Issue already referred to does not unfortunately supply the means of testing any estimate of the money lodged with the London private bankers. It states the number of these to be sixty, and thus necessarily includes bill brokers and others, not in strictness entitled to be ranked as bankers. Of these it states the deposits of nineteen as amounting to 38,968,381*l.*, which is equal to an average of 2,051,000*l.* per bank; but as it is probable that several of the private bankers did not make any return, the figures of the table are valueless as a basis for a calculation of the total money lodged of the London private banks properly so called.

Discount Houses and Bank of England.

From the "Commercial History and Review" of 1874, I find that the capital and liabilities of the three discount companies therein tabulated are:—

	Capital.	Reserve.	Deposits.
	£	£	£
Three London Discount Co.'s....	2,600,000	685,000	16,947,000

The author of that publication reckons the other discount houses to have in the aggregate resources amounting to 47,210,000*l.* These may, I assume, be distributed thus:—

	Capital and Reserve.	Deposits.
	£	£
Other discount houses	4,000,000	43,210,000

At 30th December, 1874, the figures of the Bank of England stood thus:—

[000's omitted.]

	Capital.	Rest.	Deposits.	Active Circulation and Bills.
	£	£	£	£
Bank of England........	14,550,	3,090,	26,500,	26,140,

Synopsis of Results.

From these various data I am enabled, with the assistance of the percentages of items to totals estimated in Table XLIV for liabilities and Table XLV for assets, to construct the following table* of the estimated total liabilities and assets of the banks of the United Kingdom:—

Estimated Total Amount of Bills in Circulation.

It may here be incidentally remarked that the figures in col. 9 of the table* quite corroborate the calculation of the

* See pp. 118 and 119.

total amount of bills in circulation made by Mr. Palgrave by an entirely different method. In his "Notes on Banking," Mr. Palgrave computed that "the aggregate of bills in circulation is probably "not more than 300 to 350 millions at one time, including foreign "bills."

Col. 9 of our national banking balance sheet gives the total amount of bills under discount as 274,300,000*l*. From this there must be deducted say 30 millions for bills which being rediscounted appear twice in the total, and there must be added at least 80 millions for bills held by foreign and colonial banks, and undiscounted in private hands, and say 20 millions for bills held collaterally against advances and acceptances; making a total of 344 millions.

Previously to Mr. Palgrave in 1871, Mr. Newmarch had estimated the bills current for Great Britain at 180 to 200 millions for 1856, and at 116 millions for 1843–46, whilst Mr. Leatham's figures were for the United Kingdom 132 millions, for 1839, and 89 millions for 1832. [See *Statistical Society's Journal*, vol. xiv, part 2, pp. 160 and 167, and Mr. Palgrave's "Notes on Banking," p. 36.]

It may be further remarked that col. 9 affords the means of estimating the amount of the loan fund ordinarily available in the London market for the discount of bills, thus—

	Bills Estimated. £
London discount houses	49,800,000
Bank of England (say in London)	6,000,000
London and provincial banks, say about one-half of their total bills	10,000,000
Purely London banks, joint stock and private	39,400,000
	105,200,000
English provincial, Scotch and Irish banks, without intervention of bill brokers	20,000,000
	125,200,000

If we reckon the average currency of these bills at seven weeks, the average amount maturing each week would be 17,900,000*l*., and the average amount maturing in each of the forty-two business days of these seven weeks would be very nearly 3 millions. I feel quite sure I am well within the mark in estimating that there are 3 millions of bills taken off the London market by discount daily, on the average of the business days of the year.

Mr. Newmarch's estimate for 1850, of the average amount of bills under discount in London at one time, was 78 millions.

His estimates did not include Ireland, and compare thus with mine, less the Irish figures. [See p. 120.]

TABLE LV.—*Estimated Total Liabilities and Assets*

LIABILITIES.

[00,000's omitted, thus 6,8 = 6,800,000*l.*]

	1 Paid-up Capital.	2 Reserve Fund.	3 Proprietors' Funds.	4 Money Lodged.	5 Note Circulation.	6 Acceptances.	7 Liabilities to Public.	8 Total.
ENGLAND—	£	£	£	£	£	£	£	£
Purely London—								
Joint stock	6,8	2,5	9,3	68,7	—	15,4	84,1	93,4
Private	—	—	**10,0**	**60,0**	—	**10,0**	**70,0**	**80,0**
Total London................	—	—	**19,3**	**128,7**	—	**25,4**	**154,1**	**173,4**
London and Provincial....	4,3	1,7	6,0	50,3	—	4,1	54,4	60,4
Purely Provincial—								
Joint stock, 49 banks....	11,9	5,3	17,2	79,2	0,9	1,3	81,4	98,6
„ 47 „	7,4	3,9	11,3	**50,4**	1,4	**,8**	**52,6**	**63,9**
Total joint stock...........	19,3	9,2	28,5	**129,6**	2,3	**2,1**	**134,0**	**162,5**
Private	—	—	**8,5**	**82,5**	2,5	—	**85,0**	**93,5**
Total purely provincial	—	—	**37,0**	**212,1**	4,8	**2,1**	**219,0**	**256,0**
Total England	30,4	13,4	**62,3**	**391,1**	4,8	**31,6**	**427,5**	**489,8**
SCOTLAND	9,7	3,8	13,5	80,7	6,6	5,1	92,4	105,9
IRELAND	6,8	2,7	9,5	31,7	7,2	—	38,9	48,4
Total	46,9	19,9	**85,3**	**503,5**	18,6	**36,7**	**558,8**	**644,1**
BANK OF ENGLAND	14,5	3,1	17,6	26,8	25,9	,3	53,0	70,6
Three London discount companies	2,6	,7	3,3	16,9	—	,5	17,4	20,7
Other London discount houses	—	—	**4,0**	**43,2**	—	—	**43,2**	**47,2**
Total London discount houses	—	—	**7,3**	**60,1**	—	,5	**60,6**	**67,9**
GRAND TOTAL	64,0	23,7	**110,2**	**590,4**	44,5	**37,5**	**672,4**	**782,6**

Note.—The figures ascertained are in common type, *of Banks of United Kingdom, December,* 1874.

ASSETS.

[00,000's omitted, thus 21,2 = 21,200,000*l.*]

9 Bills Dis- counted.	10 Loans and Over- drafts.	11 Total Lent to Customers.	12 Govern- ment and Other Securities.	13 Cash, &c.	14 Total Cash and Surplus Funds.	15 Property Account.	
£	£	£	£	£	£	£	ENGLAND— *Purely London—*
21,2	**49,6**	70,8	8,6	13,5	22,1	,5	Joint stock
18,2	**42,6**	**60,8**	**7,2**	**11,6**	**18,8**	**,4**	Private
39,4	**92,2**	**131,6**	**15,8**	**25,1**	**40,9**	**,9**	Together
19,7	**19,6**	39,3	8,7	11,3	20,0	1,1	*London and Provincial—* Joint stock
							Purely Provincial—
} —	—	—	—	—	—	—	
—	—	—	—	—	—	—	
—	—	—	—	—	—	—	
92,8	**92,8**	**185,6**	**24,3**	**42,2**	**66,5**	**3,9**	Total purely provincial
151,9	**204,6**	**356,5**	**48,8**	**78,6**	**127,4**	**5,9**	Total England
45,7	**30,5**	76,2	22,2	6,3	28,5	1,2	SCOTLAND
20,0	**13,4**	**33,4**	**7,7**	**6,3**	**14,0**	**1,0**	IRELAND
217,6	**248,5**	**466,1**	**78,7**	**91,2**	**169,9**	**8,1**	Total
6,9	**3,9**	**10,8**	**37,3**	21,5	**58,8**	**1,0**	BANK OF ENGLAND
—	—	—	—	—	—	—	{ Three London discount houses
—	—	—	—	—	—	—	{ Other London discount houses
49,8	**6,8**	**56,6**	—	—	**11,2**	**,1**	London discount houses
274,3	**259,2**	**533,5**	—	—	**239,9**	**9,2**	GRAND TOTAL

thus—23,4. Those estimated are in block type, thus—**203,4.**

Estimated Bills under Discount in Great Britain.

[000's omitted.]

Bills under Discount.	Mr. Newmarch, 1850.	Percentages.	Present Inquiry 1874.	Percentages.
In London	78,000,	78	125,000,	48
Locally	22,000,	22	135,000,	52
Total	100,000,	100	260,000,	100

Even allowing for a possible under-estimate of the amount of bills discounted locally in 1850, these figures indicate the very large increase in the banking resources and commercial business of Scotland and the English provinces.

Total Banking Liabilities—Comparison with Previous Investigations.

The total liabilities shown by the above approximate banking balance sheet of the United Kingdom may without exaggeration be characterised as stupendous. The amount, including the capital employed in the business, reaches a grand total of 782,600,000*l.*, or 7 millions more than the present amount of the national debt, and about 173 millions more than the total capital, including loans, of the railway system of the United Kingdom. It should be observed that the amount does not include foreign and colonial banks, which hold in England, and especially in London, an amount of capital and resources which, if it could be approximately estimated, would add many millions to the large total shown in the preceding table.

It will be instructive to compare the results of the present inquiry with those of previous investigations. The only complete estimates previously made are, I believe, that of Mr. Newmarch for 1850, that of Mr. Palgrave for 1871, and that of Mr. T. B. Moxon, of Stockport, 1873.

Mr. Moxon's able research, entitled, "The Banks of the United "Kingdom, their Resources and Reserves," and published for private circulation, in March, 1875, proceeds in so many respects upon methods identical with, or akin to those which I have adopted, that I owe it to myself to say that my own work was far advanced, and the method of it laid down in every part some time before Mr. Moxon's succinct little pamphlet came into my hands.

In collating the figures of the various investigations for comparison in the subjoined table, such alterations have been made in the mode and order of statement of each as were requisite to reduce them all to one common form.

TABLE LVI.—*United Kingdom. Capital and Liabilities of Private and Joint Stock Banks,* 1850, 1871, 1873, *and* 1874.

[000,000's omitted.]

	Mr. Newmarch, 1850.	Proportions to Total.	Mr. Palgrave, 1871.	Proportions to Total.	Mr. Moxon, 1873.	Proportions to Total.	Present Inquiry, 1874.	Proportions to Total.
	Mln. £	Per cnt.	Mln. £	Per cnt.	Mln. £	Per cnt.	Mln. £	Per cnt.
London banks	64,	25	174,	26	211,	29	234,	30
Country „	97,	37	210,	32	246,	33	256,	33
Together	161,	62	384,	58	457,	62	490,	63
Bank of England	36,	14	67,	10	70,	10	70,	9
London discount houses—capital and deposits	10,	4	78,	12	67,	9	68,	8
Total England	207,	80	529,	80	594,	81	628,	80
Scotch banks	36,	14	92,	14	95,	13	106,	14
Irish „	17,	6	41,	6	43,	6	48,	6
Total United Kingdom	260,	100	662,	100	732,	100	782,	100

In this comparison my total for the London banks includes the London and provincial banks, some at least of which are certainly included as country banks in the estimates of Mr. Newmarch and Mr. Palgrave.

Relative Weight of Bank of England in the Money Market.

The great alteration in the relative weight of the Bank of England in the money market, is but faintly indicated by the fall in the percentage of its figures to the total in Table LVI, from fourteen per cent. in 1850, to nine per cent. in 1874.

The figures of the Bank of England in the above comparison include the bullion held, Government securities in both departments, and other securities, which last figure for 21,200,000*l.* in the total. It is, however, well known that a very large proportion of the item of "other securities" in the Bank of England returns consists of investments rather than banking loans or discounts, and cannot practically be reckoned as money "on the market."

It appears from a table in Mr. Palgrave's instructive "Analysis of the Transactions of the Bank of England," London, E. Stanford, 1874, that on the average of the year 1872, the "other securities" consisted of—

	£
Bills discounted	6,900,000
Temporary advances	3,900,000
More permanent advances and investments	10,600,000
Total "other securities"	21,400,000

In this proportion I have distributed the total of the "other "securities" between cols. 9, 10, and 12 of Table LV.

In order, therefore, to arrive at a just estimate of the feebleness of the normal power of the Bank of England in the money market, it is necessary to turn to that Table, where in col. 11 the total sum lent by the banks of the United Kingdom to their customers appears by estimate to be 533,500,000*l.*, of which the Bank of England is reckoned to lend 10,800,000*l.*, or 2 per cent. of the whole. Taking bills under discount merely, the Bank of England is reckoned to hold only 2½ per cent. of the total amount of 274,300,000*l.*, estimated as held by the entire banks of the United Kingdom, exclusive of foreign and colonial banks. Again, the purely London, and London and provincial banks and discount houses, are reckoned to hold a total in bills discounted of 115,800,000*l.*, and the proportion of that amount with the Bank of England is barely 6 per cent.

Once more, restricting the comparison to purely London banks alone, the Bank of England's discounts in London and country are less than one-third of those of the London joint stock banks, and less than one-seventh of those of the London discount houses and bill brokers.

Including loans and discounts, the Bank of England lends less than one-sixth of the amount lent by the London joint stock banks, and less than one-fifth of the amount lent by the London bill brokers.

Two of the purely London joint stock banks, two of the London and provincial banks, and probably one of the London discount companies, hold bill cases individually equal in amount to or greater than that of the Bank of England.

Finally, reckoning the average amount of bills daily discounted in London at 3,000,000*l.*, the Bank of England's share in the amount, assuming the average currency of their bills at only four weeks, is only 250,000*l.*, or only 8 per cent. of the total.

All these striking figures, about the approximate accuracy of which there can be no doubt, prove beyond the possibility of controversy that whatever may have been the relative power of the Bank of England in the money market prior to 1844, the present extent of its transaction in discounts and ordinary banking loans is so small as virtually to place it in a secondary position as a lending bank in ordinary times, and thus to take quite out of its hands the control of the money market. Hence it occurs that of late years there has been between the Bank of England official minimum and the open market rate a divergence which tends so to increase both in amount and in frequency, that there is much reason to fear that it must impede seriously the action of the Bank of England rate upon the foreign exchanges, the control of which by means of the rate of discount is of such prime importance in the maintenance of the bullion reserve.

The position is briefly this—rightly or wrongly, the Bank of England is charged with the maintenance of the bullion reserve for the entire United Kingdom, and yet the instrument by which chiefly that vital trust can be fulfilled is now virtually beyond its control.

Money Lodged by the Public.

In order to arrive at a fair estimate of the total money lodged with the banks by the public, it is necessary to deduct bankers' balances in the hands of other banks and discount houses.

Mr. Palgrave estimated for 1871 that three-fifths of the deposits of the London discount houses were deposited by bankers. This would cause a deduction of 36,000,000*l.* According to Table LIV, London banks and bankers holding money lodged of 153,827,000*l.*, held 13,789,000*l.* of it from other banks, but the return includes some bill brokers, and I reckon the total bankers' balances held by the London private and joint stock banks at 20,000,000*l.*, and the total held by the purely provincial banks at 3,000,000*l.*, and assuming the bankers' balances in the Bank of England at 10 millions, we have :—

Estimate of Deposits by Private and Joint Stock Banks with Discount Houses and other Banks.

	£
With discount houses	36,000,000
With London banks, private and joint stock, and with London and provincial banks	20,000,000
With country banks	3,000,000
Bank of England	10,000,000
	69,000,000

The savings banks' deposits (old and post office) amounted at December, 1874, to 64½ millions.

In order to estimate the total money lodged by the public with the banks of the United Kingdom, we must make the following additions and deductions :—

	£
Total money lodged as stated in Table	590,400,000
Deduct deposits by banks	69,000,000
	521,400,000
Add savings banks' deposits	64,500,000
Total money lodged by the public with the banks of the United Kingdom, exclusive of Foreign and Colonial banks	585,900,000

This enormous total yields striking evidence of the wealth of the country.

Total Banking Liabilities Resting on Bank of England Reserve.

In his valuable "Notes on Banking," Mr. Palgrave makes an estimate of the banking liabilities resting on the reserve of notes and gold in the Bank of England, practically the ultimate bullion reserve of the entire kingdom.

Side by side with his figures I have, for comparison, placed those of the present inquiry.

TABLE LVII.—*Estimate of Banking Liabilities Resting ultimately on the Reserve of the Banking Department of the Bank of England.*

Banking Liabilities.	Mr. Palgrave, 1871.	Present Inquiry, 1874.
	Mln. £	Mln. £
Deposits of Bank of England....................	34	27
Liabilities to Public— Of English banks, London and country.	335	427½
Discount Houses— Two-fifths of deposits (say)	32	24
Liabilities to Public— Of Scotch banks	82	92½
,, Irish ,, ...	34½	39
Foreign and Colonial Banks— Liabilities in this country (say)	18	25
	535½	635

The banks cannot be assumed to hold ordinarily a larger amount of legal tender than they require for till money, and in a period of pressure they naturally seek to strengthen their tills. The bullion reserve in the Bank of England is thus the basis upon which rests the enormous superstructure of credit calculated by Mr. Palgrave at 535,000,000*l.*, and by myself at 635,000,000*l.* Let us see what this basis at present amounts to.

The total bullion held by the Bank of England in both departments was, at 8th December, 1875, 23,000,000*l.*, but of this 12,000,000*l.* was tied up by the Act of 1844 to secure the notes in circulation beyond the amount of 15,000,000*l.* issued under the Act against securities. The free bullion reserve was thus only 11,000,000*l.*, or somewhat under $1\frac{3}{4}$ per cent. of the liabilities which practically rest upon it. Even making the largest possible allowance for such proportion of these liabilities as may not be payable at call, the utter inadequacy of the bullion reserve cannot be contemplated without a shudder. Two days' panic in the City and it would vanish, leaving behind it the shameful alternatives of the infraction of the Act of 1844, or of the suspension of the Bank of England, and of every banker and trader in the kingdom.

Constitution of our Monetary System.

It must be confessed that our monetary system is a very peculiar one.

Our whole scheme of credit and banking may be likened to the familiar peg-top of the schoolboy, which gyrates upon a small metallic point sufficient to support it so long as it spins with rapidity, but inadequate to the task when the rotatory force is relaxed. Credit is the rotatory force of our financial system. So long as this force is unimpaired the system spins merrily on, but when it fails the insufficiency of the small metallic basis becomes only too apparent, and the fabric topples to its fall. Metaphor apart, the case stands thus: bankers hold a certain amount of deposits, which I have estimated at nearly 600,000,000*l.* With part of these they accommodate the customers who discount bills with or take advances from them. Another part—generally a fourth or a third—they hold in Government or other good securities, and in cash at call or short notice with other bankers or bill brokers. The country banks keep balances with the London banks and with the bill brokers. The London banks and bill brokers trade with these balances, reserving in their turn a fourth or a third, and keep accounts with the Bank of England. The Bank of England, whose deposits are thus composed in a great measure of bankers' balances, trades with these balances, maintaining a reserve of notes to meet liabilities; and this is the sole ultimate legal tender reserve of the entire country.

Panics.

Such is the development of credit in this country, that it has been roughly calculated that 97 per cent. of the money transactions of the nation are ordinarily effected by cheques, bills, and other expedients of credit, about 2½ per cent. by bank notes, and about one-half per cent. by coin.

But periodically it is found that credit has been over-stretched. Distrust usurps the place of confidence. All who have commercial engagements to meet—merchants, manufacturers, brokers, bankers, alike—strive to strengthen their position. The mercantile world draws upon its reserve of money lodged or credit with the banker. The banker draws upon his reserves in London to strengthen or maintain his cash balances—perhaps to meet a run upon him by his depositors. As the crisis intensifies, bills and cheques, the ordinary instruments of exchange, are looked upon with suspicion, and Bank of England notes come into rapidly increased demand. Cautious or timid bankers and others seek to obtain increased supplies, and a great pressure on the Bank of England for advances is the result. The natural consequence is, that the reserve of notes in the Bank suffers an alarmingly rapid diminution, and the panic rages with fearfully augmented intensity as the monetary barometer is seen rapidly to fall towards zero. Then Government is implored to suspend the Act. No other course seems open, and the Act is suspended by authorising the extension of the issues against security—a measure which at once allays the severity of the panic.

When it is found that in every panic since the Act was passed —alike in 1847, in 1857, and in 1866—it has been necessary to suspend its operation, it is no matter for surprise that the onus of the break-down should be very generally laid upon the Act itself. So far as I can judge, however, it is in the one-reserve system of the country, and in the management of the banking department under that system, rather than in the provisions of the Act itself, that the causes of its periodical suspension are to be sought. The Act serves the all-important purpose of providing an undoubted security for the perfect convertibility of the legal tender notes, except in the unlikely event of the public ceasing to hold them to the extent of 15,000,000*l.*

The simple reason why the Act was suspended in 1847, 1857, and 1866, was that, no other banks in the country holding bullion reserves, the reserve in the banking department had been permitted to fall in the first case to 2,000,000*l.*, in the second to 581,000*l.*, and in the third to 1,200,000*l.*; and as the Bank directors either could not or would not take steps to increase it, the banking department was practically unable to continue its business, and might at any moment have been compelled to suspend payments by a demand from two or three of the leading London banks for the repayment of their deposits.

It certainly cannot be good management which brings the leading bank of the kingdom—the pattern bank as it ought to be—periodically to such abject straits, that it is only saved from the crowning disgrace of failure by the arbitrary suspension of the law of the land. Whilst the Bank directors have no control whatever over the self-regulating issue department, they have unfettered control over the banking department. Is it not clear that they are bound to administer that department in such wise that in all calculable contingencies, however adverse, it shall continue, without assistance from the State, to carry on its transactions and meet the claims of its customers as usual? The directors know the nature of the business they conduct; they know by experience the pressure to which their resources are subjected in times of crisis; they know the state of panic which is produced as their reserve is seen to dwindle down towards a miserable million, and yet time after time they have permitted the Bank to drift into a crisis utterly unprovided against exigencies which stare them in the face. A commercial crisis overtakes them with no more—perhaps less—than their usual reserve of one-third of their liabilities. Beyond raising the rate of discount they stir no finger to maintain or increase their resources. They want notes. They cannot obtain them by the sale of English Government securities, for in a crisis there is generally no buyer of such securities, certainly no large buyer. They can have notes in exchange for bullion. They import no bullion, for they hold no foreign securities to give them the command of bullion in the European markets. Nay, more, they continue to trade with their deposits, which may be withdrawn from them at any moment. They drift towards the abyss of suspension with the happy consciousness that Government will interfere at the supreme moment, to avert, in the interests of the country, the consequences of their mismanagement.

Would not the management of any other joint stock bank be condemned if, when a crisis came, it was unable to carry on its business without the assistance of a loan from Government? Why, then, should the Bank of England be exonerated by State intervention from the natural results of its own mismanagement? Is there anything exceptional about the Bank which should render it exempt from the duty common to all bankers of maintaining at all times ample provision for the claims which are likely to be made upon it? On the contrary, does not its position as the leading bank of the kingdom, the banker of the State, the bank of the bankers, tend only to render in its case that duty all the more imperative?

The Bullion Reserve must be Augmented.

But it will be said, What would you have the Bank to do?

When a crisis is imminent it cannot restrict its advances; it must deal liberally with its customers and the public, or panic would be precipitated, and unless its advances are to be restricted the reserve must dwindle to a dangerously low point. How is this to be avoided? I reply, that the very occurrence of exhaustion proves that the reserve which becomes so rapidly spent by the strain of the crisis must have been inadequate at the outset. Since, then, the customary minimum reserve of one-third is found insufficient, why cannot the Bank habitually maintain a much larger reserve—say equal to one-half of its liabilities, and when it falls below that proportion raise the rate, and, if needful, import gold, so as to readjust the balance?

If the Bank could work habitually with a very much larger reserve, steadily maintained by means of the rate of discount, and when necessary by the importation of gold through the realisation of foreign securities, the frequency and intensity of the fluctuations in the official rate would be diminished, and the Bank would be enabled to support the banking and mercantile interests in times of pressure at least as freely as heretofore, without that exhaustion of its resources which has on past occasions superinduced monetary panic on commercial distrust.

It will at once, however, be perceived that this policy would involve a great sacrifice of profit on the part of the Bank.

The Bank is a joint stock trading company, and it is the duty of its directors to secure the best possible dividends for their shareholders. The habitual maintenance of even so small an additional bullion reserve as 5,000,000*l.* would diminish the dividend by about 1½ per cent. per annum. The directors may very naturally shrink from a policy which would entail such results.

The private interests of the Bank as a dividend-earning company are thus antagonistic to its supposed public duties as the custodian of the ultimate bullion reserve of the country. The directors are in the equivocal position of having to serve two masters—the public, who cry for reserves; the shareholders, who call for dividends.

The Leading London Banks should keep their own Legal-Tender Reserves.

If the directors of the Bank of England, out of a natural and excusable regard for the dividends of their shareholders, persistently decline or omit to keep an adequate bullion reserve, it is quite clear that the instinct of self-preservation should compel those chiefly interested in the maintenance of banking credit to take the duty into their own hands.

The leading London joint stock and private banks are the parties who are primarily imperilled by the maintenance of an inadequate bullion reserve. They habitually keep their reserve balances with the Bank of England. They do so only as a matter of convenience. They get no interest for these balances. If they were to withdraw them and hold them in notes or bullion in their own vaults, the Bank of England would lose, say 8,000,000*l.* of its deposits and 8,000,000*l.* of its reserve. This, at 8th December, 1875, would alter the position of the account as follows:—

Banking Department.		[000's omitted.]	
	£	£	£
Liabilities	26,025,	– 8,000, =	18,025,
Reserve	10,795,	– 8,000, =	2,795,
Proportion of reserve to liabilities	41½ per cent.		15½ per cent.

leaving the Bank with less than 3,000,000*l.* of bullion wherewith to supply its tills and satisfy all demands for additional accommodation.

This course would probably compel the Bank of England to add to its reserve at least 4 millions, thus securing a total bullion reserve in London of 15,000,000*l.* instead of 11,000,000*l.*, which would be a very important step in the right direction.

It will not surely be urged that the large London banks, joint stock and private, would not like to cut themselves adrift from the Bank of England, as they might require support from that institution at a time of panic. I should be very sorry to hear such a plea of weakness put forth. These banks are, several of them, much larger daily lenders in the market than the Bank of England, and in the aggregate their transactions and their liabilities greatly exceed those of the banking department in Threadneedle Street. If these large institutions, the depositaries of 150 millions of money, the London agents of scores of country banks, are to conduct their business with an *arrière pensée* of reliance on the Bank of England, I have no hesitation in saying that they are unworthy of the confidence which they enjoy.

It cannot be too strongly insisted upon, it cannot be too urgently repeated, that we have now to deal with a set of circumstances entirely different from those of 1844. The tables of this inquiry show the stupendous growth of deposit banking, and consequently of banking liabilities, since that date. Can those who are responsible for the maintenance of our banking, and, I may add, our international credit, calmly contemplate, nay glory in that growth, and yet shut their eyes to its fearful peril when they know that it is unaccompanied by any appreciable growth of the bullion reserve upon which it is based?

The danger must be firmly and honestly faced if we are to hope at all for a timely remedy. The subject is no longer confined to the region of speculation. It is eminently and intensely practical, and urgently demands the prompt and earnest attention of practical men. It was prominently brought forward by Mr. Palgrave in his "Notes on Banking" and his "Analysis of the Transactions of the "Bank of England." It was mooted by B, an eminent authority, in the "Economist," on 5th December, 1874, and again on 15th January, 1876; but no action has as yet ensued. It is to be hoped that the leading London banks, joint stock and private, will rouse themselves to grapple with the question ere it be too late. It is to be hoped that setting aside all private and conflicting interests, they will meet and discuss it, and come to the determined resolution to secure at all hazards and in the face of all obstacles, an adequate bullion reserve for the gigantic banking liabilities of the country. It is to be hoped that if the Bank of England declines, as it is probable it may, to bear the burden, they will resolve to undertake it themselves. I venture to think that if they took the initiative they might rely upon the co-operation of the country banks, who next to themselves are most vitally interested in the matter.

After all it may fairly be urged that the banking fraternity which reaps large profits from its enormously extended liability for money lodged, should not in justice seek to shunt upon the Bank of England the cost and the responsibility of keeping the bullion reserve which is necessary to sustain that liability.

The vastly altered circumstances of these present times drive us irresistibly to the conclusion that the artificial one-reserve system which was possible, and might be safe, when banking liabilities were but a fraction of what they are now, and when the Bank of England was a triton amongst minnows, has ceased to be any longer either safe or possible. It should be remembered that the one-reserve system is neither a condition nor a corollary of the Act of 1844. Engendered by the old monopoly of the Bank of England, it has survived its ill-omened sire by half a century; but its days are surely numbered. The free bullion reserve which safety demands should now be kept in this country cannot be placed at a less sum than 25,000,000*l.*, which indeed would be equivalent to only 4 per cent. of the banking liabilities ultimately resting upon it. This will be admitted to be a burden far too heavy to be borne by the Bank of England or by any other individual banking company. The artificial one-reserve system is thus in fact an anachronism, and must now give place to the natural system of a plurality of reserves, each leading bank bearing its fair share.

But it will be asked what guarantee should we then have that the necessary aggregate reserve would be maintained? What is every body's business is nobody's business. By relieving the Bank of England from a duty which it now partially acknowledges and partially fulfils, we should lose a certainty which, however inadequate, is still so far a certainty, and we should gain an uncertainty which might as likely as not prove when put to the test, equally if not more inadequate. Here then legislation must step in. Parliament should require every bank to make a monthly return of its average stock of legal tender at the close of each week. The publication of such a return should, with the aid of public opinion and public criticism, secure the maintenance of a sufficient bullion reserve, and it would effectually put a stop to the pernicious practice which is said to prevail with some London joint stock banks, of accumulating large cash reserves at the close of each half-year, for the purpose of parading in their balance sheets a show of strength which they do not normally maintain. It should also be considered whether every bank, joint stock or private, should not be required by law to make a periodical return for publication of the amount of its liabilities to the public.

All this, and it is much, could be done without any alteration of the Bank Act; but the leading banks which shared with the Bank of England the burden of bearing the bullion reserve, would of right claim a voice in fixing the official rate of discount, which is the regulator of the reserve.

Possible Legislation.

Many people consider, however, that no material change for the better can be made without an alteration of the Bank Act.

It has been proposed by some that the separation of the issue department from the banking department, decreed in 1844, should be repealed, and that no portion of the bullion held by the Bank should be specially set apart to secure the note; that, in fact, the *status quo ante* 1844, should be reverted to. This, I understand, is the course advocated by Mr. Newmarch, who strongly insists that exclusive protection of the note holder is only attainable by *pro tanto* damaging the depositor. There is no authority in the country whose opinion on such matters is entitled to greater respect than Mr. Newmarch, and it is therefore with great diffidence that I venture to differ from him. If the Bank of England note were not legal tender his position would be unassailable; but the State, in 1833, decreed the Bank of England note to be legal tender. By thus making it imperative upon the creditor to accept that note in payment of his debt, the law virtually invested it with the national guarantee. It accordingly became needful to provide a more tangible safeguard for its absolute convertibility than the mere prudence of a board of fallible directors. The Bank of England had allowed its stock of bullion to dwindle in 1825 to the dangerously low figure of 1,000,000*l.*, and again in

1839 to 2,400,000*l.*, as against liabilities in circulation and deposits to the amount of about 25,000,000*l.*; and it is quite clear that a run for payment of notes, even to a very moderate extent, would in these circumstances have caused the Bank to suspend payments and its notes to be discredited. The prime merit of the Act of 1844 is that it provides effectually for the maintenance of the convertibility of the legal tender note.

We cannot now afford to dispense with a legal tender note. We cannot face the possibility of having to return to the use of coin for large payments whenever it may suit the whim of a creditor to decline payment in any other shape. We must also have the convertibility of the legal tender note absolutely secured, and therefore we cannot, I think, return to the *status quo ante* 1844.

It has been contended by some that the suspension in times of pressure of the restrictive clause of the Bank Act should be legally provided for under certain prescribed conditions. In 1873 Mr. Lowe, then Chancellor of the Exchequer, proposed the following provisions in his "Bank of England Notes Bill:"—"Whenever "the First Lord of Her Majesty's Treasury and the Chancellor of "the Exchequer, after communicating with the Governor and "Deputy-Governor of the Bank of England, are satisfied: (1) That "the minimum rate of interest then being charged by the Governor "and Company of the Bank of England on discounts and temporary advances is not less than 12 per cent. per annum; "and (2) That the foreign exchanges are favourable to this "country; and (3) That a large portion of the existing amount of "Bank of England and other bank notes in circulation is rendered "ineffective for its ordinary purpose by reason of internal panic; "they may, by order under their hands, empower the issue department of the Bank of England to make, in excess of the authorised "issue, a special and temporary issue of Bank of England notes by "delivering the same into the banking department in exchange for "and on the credit of an equal amount of Government securities "to be transferred to the issue department." As the Bill was withdrawn it is unnecessary now to criticise the conditions of suspension which it imposed. It is sufficient to state that any suspensory power, whether exercised as heretofore at the sole discretion of the Government, or prospectively legalised by Act of Parliament, can be viewed in no other light than as an empirical and delusive remedy for the defects of the existing system. It

"Will but skin and film the ulcerous place,
Whiles rank corruption, mining all within,
Infects unseen."

It, in fact, offers a premium to that spirit of improvidence which is the great vice of our financial system. Everybody, from the Bank of England downwards, is tempted to speculate on the suspensory power coming into operation to relieve them from the effects of their own improvidence; and those banks and merchants who, in the face of the temptation have, at a heavy cost, persistently maintained adequate reserves over a period of years find, when the pressure comes at last, that the suspensory power deprives them of the legitimate fruits of their self-denying forethought and enables their less provident neighbours to ride through the storm as securely as themselves. Again, the suspensory power must always be unjust in its incidence. If it come into operation to-day it will save the merchant or banker whose bills fall due to-morrow; while the unfortunate individual, no less worthy of assistance, whose bills fell due yesterday has been compelled to succumb.

Proposed State Department of Issue.

Probably the best, if not the only practicable, legislative solution of the pressing difficulty would be the transference of the issue department to Government, coupled with a provision for a monthly return of the average stock of legal tender held weekly by each bank.

Under this arrangement the State Department of Issue would hold securities for 15,000,000*l.*, and gold coin and bullion for the excess of issue beyond that sum. It might also with advantage act as a bank of deposit receiving from the bankers sums in notes or gold of not less than say 100,000*l.* at any one time, and inscribing these to their credit, to be drawn out also in sums of not less than 100,000*l.* at any one time. The securities and bullion would thus always equal the sum of the notes in circulation and the bankers' balances.

Accounts might be published weekly in some such form as this:—

	£		£
Notes issued	30,000,000	Securities	15,000,000
Bankers' balances........	10,000,000	Gold coin and bullion.	25,000,000
	40,000,000		40,000,000

When notes were paid in, either an equivalent of coin or bullion would be taken out, or an equivalent increase would be made to the bankers' balances. When gold was paid in, either notes would be issued for the amount, or the sum would be added to the bankers' balances. When gold was taken out, either the notes issued or the bankers' balances would be correspondingly diminished.

This would involve no interference with the principle of the Act of 1844, and would effectually cause the Bank of England, and all other leading banks to rely upon their own reserves, without resting upon that hope of assistance from the State in a period of pressure which, already three times realised, constitutes in a great measure the vice and perpetuates the weakness of the present system.

The result would be that in the aggregate a much larger bullion reserve would be held, and the duty of supporting banking and general credit by liberal advances in time of crisis, instead of being concentrated as hitherto upon one institution with an inadequate reserve, would be distributed amongst several large institutions each holding a substantial reserve.

The official rate of discount might from time to time be fixed by a committee of the clearing banks, under the presidency of the governor of the Bank of England, as suggested by "B" in his recent letter to the "Economist."

If it be contended that this scheme would be most uneconomical of capital, it may be replied that is its very merit. We are now suffering the serious inconveniences and incurring the grave dangers of a system in which economy of capital is carried to a point far beyond the limits of prudence. The loss of interest involved in the alteration of that system to one of ampler reserves will count as nothing compared with the advantage of placing the enormous financial and banking engagements of this great commercial country upon a thoroughly sound and adequate basis of bullion.

Here, however, it should be observed that the largest possible bullion reserves will avail nothing if credit be stretched beyond its proper limits. This is a matter that bankers have pretty much in their own hands. They are the chief administrators of credit. Truly it is a grave trust, but it is satisfactory to know that their own best interests lie in its steadfast fulfilment.

An authority so eminent as Mr. Bagehot having declared emphatically against the transference of the issue department to the State, it is necessary to inquire into the grounds of his objection. These are embodied as follows in his evidence before the Committee on Banks of Issue, 1875:—"I think that in time of "panic, if a State issue was the sole legal tender, there might be "extreme and very dangerous pressure on the Government to lend "money to persons to whom it ought not to be lent." "At present "the loans are made by the Bank of England in time of panic, and "the Bank of England knows how to manage, because it is a "trader in the market; but if the Government once began to lend, "I do not know whether it would have the same discretion. I am "quite sure it would never be thought to be equally impartial, "because the Prime Minister or the Chancellor of the Exchequer "might be member for a great commercial community, for London "or Liverpool, and the public would never believe that his constituents did not get a benefit. For these reasons, under a Parliamentary Government like ours, I think a State issue would be "exceedingly dangerous."

Mr. Bagehot's objection is based on the assumption that Government would be called upon to lend notes, and would lend notes, in a time of panic; but surely that is a groundless assumption. Is Government called upon to make advances, and does Government make advances in gold because the Mint is a department of the State? Certainly not. And the functions of a State department of issue would necessarily be as purely mechanical as those of the Mint. Under existing circumstances, pressure is put on the Bank of England for loans in a time of panic, because it is a lending bank as well as the source of legal-tender issue. The combination of these two functions in the Bank is in fact one of the prime causes of the unsatisfactory operation of the existing system. If these functions were completely dissevered by the transference of the purely mechanical issue department to the State, the Bank of England and all other banks would be constrained, as I have indicated, to rely, in a time of pressure, upon their own reserves, and not upon any empirical and temporary addition to the legal-tender issues of the State.

Very probably some of the suggestions which I have hazarded may be considered crude and impracticable. Perhaps they are; but they are thrown out in the conviction that the subject urgently demands investigation and discussion in all its bearings.

That a question so momentous should continue year after year to be shirked, as it has been, is scarcely creditable to the vaunted prudence of bankers, to the discernment of Her Majesty's advisers, or to the wisdom of Parliament, and it will be well for the country if it be not some day rudely awakened from its ignorant indifference to the subject by a commercial and banking collapse totally unparalleled by any previous experience.

Precautions suggested for Present Adoption.

Parliamentary inquiry will no doubt come, but legislation will linger, and meanwhile it seems to be before all needful that instead of looking to and leaning upon the Bank of England, no longer *primus inter pares*, those who in the centre of our national and international finance are the most deeply interested in the permanent maintenance of banking credit should themselves hold the command of such supplies of bullion as may suffice to stem the rising tide of distrust on the first symptoms of danger. The means thereto are plain. Let the great London banks hold, besides their reserves of bullion in their own vaults and their securities immediately convertible in the London market, such funds in readily available shape, money at call, short bills, saleable securities, in the chief money markets of Europe, as shall ensure by their realisation a free and immediate flow to London of that bullion which is so needful when "distrust asleep," as credit has been well styled, threatens to awake and put on the fearful aspect of panic.

Table LVIII.—*Purely Provincial English Joint Stock*

[000's omitted in columns

Number.	Purely Provincial Banks. [Banks of Issue in *Italics*.]	1 When Established.	2 Date of Balance, 1873.	3 Subscribed Capital.	4 Uncalled Capital.	5 Liabilities. Paid-up Capital.	6 Reserve, including Balance of Profit Carried Forward.
				£	£	£	£
1	*Carlisle and Cumberland Bank* ...	1836	Dec.	300,	225,	75,	102,
2	*Cumbld. Union Bkg. Co., Limd.*....	'29	,,	540,	315,	225,	78,
3	*Carlisle City and District Bank*....	'37	,,	160,	80,	80,	86,
4	*Bank of Whitehaven, Limited*	'37	,,	220,	146,	74,	42,
5	Adelphi Bank, Limited	1861	Dec.	260,	130,	130,	2,
6	Liverpool Commercial Banking Company, Limited....................	'32	,,	700,	350,	350,	204,
7	Liverpool Union Bank	'35	,,	600,	75,	525,	210,
8	National Bank of Liverpool, Limited	'63	,,	750,	300,	450,	77,
9	North-Western Bank, Limited	'64	,,	1,080,	675,	405,	92,
10	*North and South Wales Bank*	'36	June	300,	—	300,	170,
11	Parr's Banking Company, Limited	1865	Dec.	1,000,	850,	150,	46,
12	Manchester and County Bank, Limited	'62	,,	4,400,	3,740,	660,	321,
13	Union Bank of Manchester, Limited	'36	June	947,	531,	417,	107,
14	Lancashire and Yorkshire Bank, Limited	'72	Dec.	485,	243,	243,	29,
15	*Bradford Banking Company*	1827	Dec.	550,	330,	220,	260,
16	,, *Commercial J. S. Bk.*....	'33	,,	680,	510,	170,	126,
17	Bradford District Bank, Limited	'62	,,	650,	455,	195,	103,
18	,, Old Bank, Limited	'64	,,	983,	590,	393,	136,
19	Bank of Leeds, Limited	'64	,,	605,	454,	151,	37,
20	Yorkshire Banking Company	'43	,,	500,	250,	250,	121,
21	Sheffield Banking Company	'31	,,	419,	126,	293,	104,
22	*Sheffield and Hallamshire Bank*...	'36	June	733,	550,	183,	55,
23	,, *Rotherham* ,, ...	'36	Dec.	502,	341,	161,	85,
24	Sheffield Union Banking Company	'43	June	250,	100,	150,	38,
25	*Burton, Uttoxeter, &c., Union Bank*	1839	Dec.	260,	130,	130,	68,
26	Nottingham J. S. Bank, Limited...	'65	,,	470,	376,	94,	29,
27	*Stamford, Spalding, &c., Bkg. Co.*	'32	,,	200,	—	200,	104,
28	*Leicestershire Banking Company*..	'29	,,	750,	525,	225,	87,

* Including bills

Banks. *Balance Sheets of Forty-Four Banks,* 1873.

headed £, thus 300 = 300,000*l*.]

7	8	9	10	11	12	13	14	15	
Liabilities.				Assets.					
Money Lodged, including Dividend Due.	Circulation of Notes.	Acceptances.	Total Resources.	Bills and Advances.	Government and other Securities.	Cash, &c.	Property Account.	Authorised Issue.	Number.
£	£	£	£	£	£	£	£		
558,	—	—	735,	—	727,	—	8,	25,610	1
1,791,	34,	—	2,128,	1,534,	65,	489,	39,	35,395	2
703,	—	—	869,	—	864,	—	5,	19,972	3
626,	28,	—	770,	628,	62,	73,	8,	32,681	4
178,	—	—	310,	258,	—	31,	22,	—	5
1,209,	—	—	1,763,	1,438,	—	175,	150,	—	6
2,895,	—	601,	4,231,	3,264,	—	930,	36,	—	7
740,	—	41,	1,309,	918,	—	366,	25,	—	8
950,	—	350,*	1,797,	1,644,	—	120,	32,	—	9
3,286,	59,	108,	3,924,	2,910,	1,014,		—	63,951	10
1,972,	—	—	2,168,	1,285,	101,	771,	12,	—	11
5,378,	—	—	6,359,	—	6,326,	—	33,	—	12
1,300,	—	47,	1,871,	1,550,	—	293,	28,	—	13
499,	—	—	770,	609,	—	160,	1,	—	14
1,668,	50,	—	2,198,	—	2,193,	—	5,	49,292	15
512,		—	808,	—	794,	—	14,	30,084	16
574,	—	—	871,	—	857,	—	4,	—	17
1,141,	—	—	1,669,	—	1,649,	—	20,	—	18
361,	—	58,	608,	539,	—	59,	10,	—	19
2,262,	119,	—	2,751,	—	2,703,	—	48,	122,532	20
1,596,	—	—	1,994,	—	1,972,	—	22,	35,843	21
567,	—	—	805,	—	800,	—	5,	23,524	22
1,562,	—	—	1,807,	—	1,793,	—	15,	52,496	23
359,	—	—	547,	—	543,	—	5,	—	24
1,289,	—	—	1,487,	—	1,466,	—	21,	60,701	25
558,	—	—	681,	—	670,	—	10,	—	26
1,100,	53,	—	1,457,	858,	301,	278,	20,	55,721	27
1,282,	64,	—	1,659,	1,135,	265,	244,	15,	86,060	28

rediscounted 214,823*l*.

TABLE LVIII.—*Purely Provincial English Joint Stock*

[000's omitted in columns

Number.	Purely Provincial Banks. [Banks of Issue in *Italics*.]	1 When Esta-blished.	2 Date of Balance, 1873.	3 Subscribed Capital.	4 Uncalled Capital.	5 Liabilities. Paid-up Capital.	6 Liabilities. Reserve, including Balance of Profit Carried Forward
				£	£	£	£
29	Staffordshire J. S. Bank, Limited..	1864	Dec.	874,	700,	174,	55,
30	*County of Stafford Bank*	'36	,,	120,	60,	60,	32,
31	Lloyd's Banking Company, Limited	'65	,,	2,030,	1,726,	305,	128,
32	Birmingham J. S. Bank ,,	'61	,,	2,039,	1,835,	204,	215,
33	,, Banking Co. ,,	'66	June	1,491,	1,342,	149,	106,
34	,, Town and District....	'36	,,	400,	240,	160,	49,
35	Dudley and W. Bromwich B. Co..	'33	Dec.	426,	341,	85,	6,
36	*Wolverhptn. & Staffdsh. B. Co.*	'32	,,	500,	400,	100,	36,
37	*Worcester City and Coty., Limtd.*.	1840	Dec.	1,000,	750,	250,	105,
38	Bucks and Oxon Union B., Lmtd.	'66	,,	400,	320,	80,	16,
39	*W. of Engld. & S. Wales. Dist. B.*	'34	,,	1,000,	250,	750,	129,
40	Devon and Cornwall Banking Co.	'32	,,	400,	272,	128,	80,
41	Three Towns' Banking Co., Limited	'63	,,	100,	50,	50,	1,
42	*Wilts and Dorset Banking Co.*	'35	,,	375,	125,	250,	155,
43	Hampshire Banking Company	'34	,,	—	—	150,	41,
44	North Kent Bank, Limited............	'64	,,	65,	43,	22,	1,

* Including cash

TABLE LIX.—*London and Provincial Joint*

[000's omitted in columns

Number.	Purely Provincial Banks.	1 When Esta-blished.	2 Date of Balance, 1873.	3 Subscribed Capital.	4 Uncalled Capital.	5 Liabilities. Paid-up Capital.	6 Liabilities. Reserve, including Balance of Profit Carried Forward.
				£	£	£	£
1	National Provincial Bank of England .... CAPITAL. 10,000 shares at 100*l*. = 1,000,000*l*. 77,500 ,, 20*l*. = 1,550,000*l*.	1833	Dec.	2,550,	1,200,	1,350,	650,
2	London and County Bank	'36	,,	3,000,	1,800,	1,200,	624,
3	Midland Banking Co., Limited	1863	Dec.	1,500,	1,200,	300,	49,
4	London and South-Western Bank, Limited	'62	,,	831,	665,	166,	11,
5	London and Provincial Bank, Limited	'64	,,	254,	127,	127,	17,
6	London and Yorkshire Bank, Limited	'72	,,	674,	576,	98,	1,
	Totals	—	—	8,809	5,568	3,241	1,352

Banks. Balance Sheets of Forty-Four Banks—Contd.

headed £, thus 300, = 300,000*l.*]

7	8	9	10	11	12	13	14	15	
Liabilities.				Assets.					
Money Lodged, including Dividend Due.	Circulation of Notes.	Acceptances.	Total Resources.	Bills and Advances.	Government and other Securities.	Cash, &c.	Property Account.	Authorised Issue.	Number.
£	£	£	£	£	£	£	£		
638,	—	—	867,	739,	28,	96,	5,	—	29
406,	—	—	499,	368,	35,	88,	8,	9,418	30
4,238,	—	—	4,671,	3,770,	—	852,	49,	—	31
1,567,	—	—	1,985,	1,593,	235,	138,	19,	—	32
1,065,	—	—	1,320,	1,080,	55,	160,	24,	—	33
808,	—	—	1,017,	847,	45,	106,	19,	—	34
974,	36,	—	1,100,	976,*	117,	—	7,	37,696	35
699,	20,	—	855,	827,	—	24,	4,	35,378	36
1,012,	—	—	1,367,	1,140,	54,	144,	28,	6,848	37
617,	—	—	713,	—	701,	—	12,	—	38
4,209,	—	—	5,088,	4,040,	507,	452,	88,	83,535	39
1,639,	—	—	1,847,		1,847,			—	40
45,	—	—	96,	87,	—	4,	5,	—	41
2,682,	75,	—	3,162,	1,471,	1,272,	378,	40,	76,162	42
1,849,	—	—	2,041,	1,300,	331,	374,	35,	—	43
82,	—	—	106,	90,	—	14,	2,	—	44

on hand.

Stock Banks. Balance Sheets for Year 1873.

headed £, thus 2,550, = 2,550,000*l.*]

7	8	9	10	11	12	13	14	
Liabilities.				Assets.				
Money Lodged, including Dividend Due.	Circulation of Notes.	Acceptances.	Total Resources.	Bills and Advances.	Government and other Securities.	Cash, &c.	Property Account.	Number.
£	£	£	£	£	£	£	£	
21,949,	—	547,	24,496,	14,569,	5,215,	4,299,	413,	1
18,248,	—	4,070,	24,142,	16,835,	1,817,	5,209,	281,	2
1,416,	—	—	1,766,	1,575,	—	168,	22,	3
808,	—	36,	1,021,	799,	—	199,	23,	4
1,052,	—	—	1,196,	700,	227,	247,	21,	5
250,	—	—	349,	304,	—	31,	14,	6
43,723,	—	4,653,	52,970,	34,782,	7,259,	10,153,	774,	

TABLE LX.—*Analysis of Balance Sheets of Forty-Four*

[00's omitted in Cols. 1 and 3, thus 19,2 = 19,200*l.*]

Number.	Purely Provincial Banks. [Banks of Issue in *Italics*.]	1 Net Profit, less Charges.	2 Ratio per Cent. per Annum of Net Profits to Total Resources.	3 Charges.	4 Ratio per Cent. of Charges to Net Profits.	5 Ratio per Cent per Annum of Charges to Liabilities to Public.	6 Number of Branches.
		£	Per cnt.	£	Per cnt.	Per cnt.	No.
1	*Carlisle and Cumberland Bank*	19,2	2·62	—	—	—	5
2	*Cumbld. Union Bkg. Co., Limd*.....	44,6	2·10	14,2	31·81	0·77	12
3	*Carlisle City and District Bank*....	21,4	2·46	—	—	—	4
4	*Bank of Whitehaven, Limited*	18,1	2·35	3,7	20·58	0·56	3
5	Adelphi Bank, Limited	4,2*	2·70	2,9*	69·04	3·24	1
6	Liverpool Commercial Banking Company, Limited....................	44,1	2·50	—	—	—	—
7	Liverpool Union Bank....................	74,8	1·76	—	—	—	—
8	National Bank of Liverpool, Limited	13,3*	2·03	—	—	—	1
9	North-Western Bank, Limited ...	40,3	2·25	—	—	—	—
10	*North and South Wales Bank*	70,3	1·79	33,7	47·95	0·97	27
11	Parr's Banking Company, Limited	42,7	1·97	15,9	37·19	0·80	9
12	Manchester and County Bank, Limited	66,0*	2·08	17,5*	26·53	0·64	17
13	Union Bank of Manchester, Limited	52,0	2·78	19,7	37·99	1·46	12
14	Lancashire and Yorkshire Bank, Limited	8,3*	2·15	4,3*	51·81	1·72	4
15	*Bradford Banking Company*	67,9	3·09	—	—	—	—
16	„ *Commercial J. S. Bk.*	34,9	4·32	—	—	—	—
17	Bradford District Bank, Limited....	15,6*	3·58	3,5*	22·15	1·22	1
18	„ Old Bank, Limited	28,7	3·44	—	—	—	2
19	Bank of Leeds, Limited	15,1	2·48	3,2	20·93	1·52	—
20	Yorkshire Banking Company	43,5*	3·16	—	—	—	14
21	Sheffield Banking Company............	58,4	2·92	—	—	—	3
22	*Sheffield and Hallamshire Bank*....	26,4	3·28	—	—	—	—
23	„ „ *Rotherham* „	37,5	2·07	—	—	—	4
24	Sheffield Union Banking Company	20,4	3·73	—	—	—	2
25	*Burton, Uttoxeter, &c., Union Bank*	14,3*	1·92	—	—	—	2
26	Nottingham J. S. Bank, Limited....	13,7	2·02	4,7	33·94	0·84	4
27	*Stamford, Spalding, &c., Bkg. Co.*	29,6	2·03	—	—	—	9
28	*Leicestershire Banking Company*	36,1	2·18	—	—	—	8
29	Staffordshire J. S. Bank, Limited....	22,4	2·58	—	—	—	7
30	*County of Stafford Bank*...............	13,4	2·68	—	—	—	—
31	Lloyd's Banking Company, Limited	79,8	1·71	—	—	—	14
32	Birmingham J. S. Bank, Limited....	49,4	2·49	—	—	—	1
33	„ Banking Co., Limited	25,4	1·93	—	—	—	—

* For half

Purely Provincial English Joint Stock Banks, 1873.

[000's omitted in Cols. 8, 9, 10, and 13.]

7 Number of Sub-Branches.	8 Average Liabilities to Public at each Office, ex Subs.	9 Liabilities to Public.	10 Proprietors' Funds.	11 Ratio per Cent. of Proprietors' Funds to Liabilities to the Public.	12 Ratio per Cent. of Uncalled Capital to Liabilities to Public.	13 Government Securities, Cash, &c.	14 Ratio per Cent. of Government Securities, Cash, &c., to Liabilities to Public.	Number.
No.	£	£	£	Per cnt.	Per cnt.	£	Per cnt.	
—	93,	558,	177,	31·62	40·29	—	—	1
4	140,	1,825,	303,	16·61	17·26	554,	30·38	2
—	140,	703,	166,	23·66	11·40	—	—	3
—	164,	655,	116,	17·57	22·35	135,	20·48	4
—	89,	178,	132,	73·89	72·88	31,	17·27	5
—	1,209,	1,209,	554,	45·85	28·96	175,	14·47	6
—	3,496,	3,496,	735,	21·02	2·14	930,	26·61	7
—	391,	782,	527,	67·44	38·38	366,	46· 2	8
—	1,300,	1,300,	497,	38·20	51·91	120,	9·26	9
5	123,	3,454,	470,	13·61	—	1,014,	29·36	10
5	197,	1,972,	196,	9·93	43·09	872,	44·20	11
7	299,	5,378,	981,	18·24	69·54	—	—	12
4	104,	1,347,	524,	38·88	39·39	293,	21·72	13
1	100,	499,	271,	54·45	48·65	160,	32·09	14
—	1,218,	1,718,	480,	27·92	19·21	—	—	15
—	512,	512,	296,	57·82	99·55	—	—	16
—	287,	574,	298,	51·86	79·29	—	—	17
—	380,	1,141,	529,	46·35	51·69	—	—	18
—	419,	419,	189,	45·02	108·25	59,	14·11	19
7	159,	2,380,	371,	15·58	10·50	—	—	20
—	399,	1,596,	397,	24·90	7·87	—	—	21
—	567,	567,	238,	42·02	97·00	—	—	22
—	312,	1,562,	246,	15·72	21·87	—	—	23
—	120,	359,	188,	52·29	27·82	—	—	24
—	430,	1,289,	198,	15·36	10·09	—	—	25
—	111,	558,	123,	22·05	67·48	—	—	26
9	115,	1,153,	304,	26·39	—	579,	50·19	27
2	152,	1,347,	312,	23·17	38·99	509,	37·79	28
—	80,	638,	229,	35·88	109·72	123,	19·35	29
—	406,	406,	92,	22·76	14·77	122,	30·14	30
9	282,	4,238,	433,	10·22	40·73	852,	20·10	31
—	783,	1,567,	419,	26·72	117·16	372,	23·77	32
—	1,064,	1,064,	255,	23·97	12·61	215,	20·22	33

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year only.

TABLE LX.—*Analysis of Balance Sheets of Forty-Four*

[00's omitted in Cols. 1 and 3, thus 19,2 = 19,200*l.*]

Number.	Purely Provincial Banks. [Banks of Issue in *Italics*.]	1 Net Profit, less Charges.	2 Ratio per Cent. per Annum of Net Profits to Total Resources.	3 Charges.	4 Ratio per Cent. of Charges to Net Profits.	5 Ratio per Cent. per Annum of Charges to Liabilities to Public.	6 Number of Branches.
		£	Per cnt.	£	Per cnt.	Per cnt.	No.
34	Birmingham Town and District	24,2	2·38	—	—	—	—
35	Dudley and W. Bromwich B. Co....	5,7	0·52	—	—	—	4
36	*Wolverhptn. & Staffdsh. B. Co.*	14,0	1·64	—	—	—	—
37	*Worcester City and Coty., Limtd.*.	20,7*†	3·03	9,8*	47·12	1·93	9
38	Bucks and Oxon Union B., Limtd.	18,0	2·52	—	—	—	8
39	*W. of Engld. & S. Wales Dist. B.*	118,4	2·33	51,8	43·73	1·23	37
40	Devon and Cornwall Banking Co.	27,4	1·48	—	—	—	14
41	Three Towns' Banking Co., Limited	2,6	2·71	1,7	65·39	3·77	—
42	*Wilts and Dorset Banking Co.*	55,5	1·75	29,9	53·94	1·08	41
43	Hampshire Banking Company	15,1*	1·48	14,5*	96·02	1·56	24
44	North Kent Bank, Limited............	9*	1·63	—	—	—	1

* For half year only.

TABLE LXI.—*London and Provincial Joint Stock*

[00's omitted in Cols. 1 and 3, thus 397,1 = 397,100*l.*]

Number.	Purely Provincial Banks.	1 Net Profit, less Charges.	2 Ratio per Cent. per Annum of Net Profits to Total Resources.	3 Charges,	4 Ratio per Cent. of Charges to Net Profits.	5 Ratio per Cent. per Annum of Charges to Liabilities to Public.	6 Number of Branches.
		£	Per cnt.	£	Per cnt.	Per cnt.	No.
1	National Provincial Bank of England................................. CAPITAL. 10,000 shares at 100*l.* = 1,000,000*l.* 77,500 ,, 20*l.* = 1,550,000*l.*	397,1	1·62	—	—	—	134
2	London and County Bank	148,7*	1·23	117,9*	79·25	1·05	148
3	Midland Banking Co., Limited	16,0*	1·82	11,6*	72·35	1·63	21
4	London and South-Western Bank, Limited	8,1*	1·59	11,1*	136·88	2·63	23
5	London and Provincial Bank, Limited	10,8*	1·80	13,9*	—	2·64	46
6	London and Yorkshire Bank, Limited	3,1	0·89	7,6	245·16	3·03	7
	Totals	—	—	—	—	—	379

* For half

Purely Provincial English Joint Stock Banks—Contd.

[000's omitted in Cols. 8, 9, 10, and 13.]

7 Number of Sub-Branches.	8 Average Liabilities to Public at each Office, ex Subs.	9 Liabilities to Public.	10 Proprietors' Funds.	11 Ratio per Cent. of Proprietors' Funds to Liabilities to the Public.	12 Ratio per Cent. of Uncalled Capital to Liabilities to Public.	13 Government Securities, Cash, &c.	14 Ratio per Cent. of Government Securities, Cash, &c., to Liabilities to Public.	Number.
No.	£	£	£	Per cnt.	Per cnt.	£	Per cnt.	
—	808,	808,	209,	25·85	29·71	150,	18·60	34
—	202,	1,009,	91,	9·01	33·76	—	—	35
—	719,	719,	136,	18·90	55·60	—	—	36
4	101,	1,012,	355,	35·11	74·13	199,	19·66	37
—	68,	617,	96,	15·56	51·86	—	—	38
4	111,	4,209,	879,	20·88	5·94	960,	22·81	39
—	109,	1,639,	208,	12·69	16·59	—	—	40
—	45,	45,	51,	112·42	110·85	4,	8·47	41
8	66,	2,757,	405,	14·54	4·53	1,651,	59·30	42
—	74,	1,849,	191,	10·34	—	705,	38·13	43
—	41,	82,	24,	29·04	52·37	14,	16·61	44

† Without deduction of rebate.

Banks. Analysis of Balance Sheets, 1873.

[000's omitted in Cols. 8, 9, 10, and 13.]

7 Number of Sub-Branches.	8 Average Liabilities to Public at each Office, ex Subs.	9 Liabilities to Public.	10 Proprietors' Funds.	11 Ratio per Cent. of Proprietors' Funds to Liabilities to the Public.	12 Ratio per Cent. of Uncalled Capital to Liabilities to Public.	13 Government Securities, Cash, &c.	14 Ratio per Cent. of Government Securities, Cash, &c., to Liabilities to Public.	Number.
No.	£	£	£	Per cnt.	Per cnt.	£	Per cnt.	
2	167,	22,496,	2,000,	8·88	5·33	9,514,	42·29	1
—	150,	22,318,	1,824,	8·16	8·06	7,026,	31·48	2
4	64,	1,416,	349,	24·66	84·76	168,	11·89	3
—	35,	844,	177,	20·95	78·76	199,	23·54	4
—	22,	1,052,	144,	13·66	12·06	474,	45·08	5
—	31,	250,	99,	39·53	230·33	31,	12·47	6
—	—	48,376,	4,593,	—	—	17,412,	—	

year only.

TABLE LXII.—*Dividends and Prices of Forty-Four Purely Provincial English Joint Stock Banks*, 1873.

Number.	Purely Provincial Banks. [Banks of Issue in *Italics*.]	1 Dividend per Cent. per Annum, including Bonus.	2 Amount per Share Paid.	3 Market Price, January, 1874.	4 Premium per Cent.	5 Yield per Cent. at Purchase Price.		
						£	*s.*	*d.*
1	*Carlisle and Cumberland Bank*	22	5	19	280	5	15	9
2	*Cumbld. Union B. Co., Limd.*	16	12½	37½	200	5	6	8
3	*Carlisle City and District Bank*	22	12½	43½	248	6	6	5
4	*Bank of Whitehaven, Limited*	22½	10	38½	285	5	16	10
5	Adelphi Bank, Limited	Nil	10	7½	Dis.	—		
6	Liverpool Commercial Banking Company, Limited	11¼	10	17¾	77½	6	6	9
7	Liverpool Union Bank....................	10	17½	25½	45 5/7	6	17	3
8	National Bank of Liverpool, Limited	6⅔	15	14¼	Dis.	6	17	11
9	North-Western Bank, Limited	7	7½	8¾	16⅔	6	–	–
10	*North and South Wales Bank*	17½	10	31	210	5	12	10
11	Parr's Banking Company, Limited	15	15	38	153⅓	5	18	5
12	Manchester and County Bank, Limited	13¾	15	42	180	4	18	2
13	Union Bank of Manchester, Limited	10¾	11	18¾	70 5/11	6	6	1
14	Lancashire and Yorkshire Bank, Limited	6	10	12	20	5	–	–
15	*Bradford Banking Company*	25	40	150	275	6	13	4
16	,, *Commercial J. S. Bk.*....	18	20	59	195	6	2	–
17	Bradford District Bank, Limited	8½	30	57½	91⅔	4	8	8
18	,, Old Bank, Limited	13¾	20	46	130	5	19	6
19	Bank of Leeds, Limited	7	25	32	28	5	9	4
20	Yorkshire Banking Company	22⅘	12½	49	292	5	16	3
21	Sheffield Banking Company	17	140	270	92 6/7	8	16	3
22	*Sheffield and Hallamshire Bank*....	14	25	47½	90	7	7	4
23	,, *and Rotherham* ,, ...	20	32	83	159⅜	7	14	2
24	Sheffield Union Banking Company	11¼	12	20½	76⅚	6	11	8
25	*Burton, Uttoxeter, &c., Union Bank*	17	10	26½	165	6	8	4
26	Nottingham J. S. Bank, Limited	8½	10	14	40	6	1	5
27	*Stamford, Spalding, &c., B. Co.*	16	20	64	220	5	–	–
28	*Leicestershire Banking Company*	13½	40	80	100	6	5	–
29	Staffordshire J. S. Bank, Limited	8¾	20	23½	17½	7	8	11
30	*County of Stafford Bank*	18	5	15½	210	5	16	1
31	Lloyd's Banking Company, Limited	20	7½	21½	186⅔	6	19	6
32	Birmingham J. S. Bank, ,,	20	10	35	250	5	14	3
33	,, Banking Co., ,,	11¼	5	13	160	4	6	6
34	,, Town and District	10	8	13½	68¾	5	18	6
35	Dudley and W. Bromwich B. Co.	6¾	10	13	30	5	3	10
36	*Wolverhptn. and Staffdsh. B. Co.*	10	10	16	60	6	5	–

TABLE LXII.—*Dividends and Prices of Forty-Four Purely Provincial English Joint Stock Banks—Contd.*

Number.	Purely Provincial Banks. [Banks of Issue in *Italics*.]	1 Dividend per Cent. per Annum, including Bonus.	2 Amount per Share Paid.	3 Market Price, January, 1874.	4 Premium per Cent.	5 Yield per Cent. at Purchase Price.		
						£	*s.*	*d.*
37	*Worcester City and County, Limd.*	12⅜	12½	21½	72	7	3	10
38	Bucks and Oxon Union, Limited	20	5	16½	230	6	1	2
39	*W. of Engld. and S. Wales Dist. B.*	14	15	30	100	7	–	–
40	Devon and Cornwall Banking Co.	15⅝	32	74	131¼	6	15	1
41	Three Towns' Banking Co., Limited	5	25	—	—		—	
42	*Wilts and Dorset Banking Co.*	22	10	49½	395	4	8	10
43	Hampshire Banking Company	13	10	—	—		--	
44	North Kent Bank, Limited............	8	10	par	—	8	–	–

TABLE LXIII.—*London and Provincial Joint Stock Banks. Dividends and Prices*, 1873.

Number.	Purely Provincial Banks.	1 Dividend per Cent. per Annum, including Bonus.	2 Amount per Share Paid.	3 Market Price, January, 1874.	4 Premium per Cent.	5 Yield per Cent. at Purchase Price.		
						£	*s.*	*d.*
1	National Provincial Bank of of England .... CAPITAL. 10,000 shares at 100*l.* = 1,000,000*l.* 77,500 „ 20*l.* = 1,550,000*l.*	25	42	157½	275	6	13	4
2	London and County Bank	20	20	62	210	6	9	–
3	Midland Banking Co., Limited	9	20	26½	32½	6	15	10
4	London and South-Western Bank, Limited	6½	20	16½	Dis.	7	17	6
5	London and Provincial Bank, Limited	9½	5	7¾	55	6	2	6
6	London and Yorkshire Bank, Limited	4	7½	5½	Dis.	5	9	1
	Average	—	—	—	—	6	11	3

VII. NON-LEGAL-TENDER NOTE CIRCULATION.

Introduction.

The intrusion into Cumberland of branches of a Scotch bank, which occurred in February, 1874, has directed the attention of the public and of Parliament to the question of the non-legal-tender note issues. In 1875 Mr. Goschen introduced into the House of Commons a Bill, the object of which was to confine the banking operations of the Scotch banks to their own country, under the penalty of losing their privilege of issue in Scotland. This Bill was met at the instance of the Government by the appointment of a

Select Committee of the House "to consider and report upon the "restrictions imposed and the privileges conferred by law on "bankers authorised to make and issue notes in England, Scotland, "and Ireland respectively." This committee has examined twenty-six witnesses, whose evidence has been printed in a voluminous blue book, with a short report to the effect that the committee "have not had time to prepare a report in the present session, and "consequently recommend their reappointment next year."

Much controversy has thus been revived on the vexed but important question of note issues.

In order to the clear understanding of the case I propose to state :—

1. The statutory conditions of note issues in England, Scotland, and Ireland, and their effects.

2. The distribution and actual position of the note circulation in each of the three kingdoms.

3. The various lines of policy proposed.

4. The bearing of these lines of policy on the question of the intrusion of the Scotch banks into England.

Statutory Conditions of Non-Legal-Tender Note Issue in England and Wales, and their Operation.

The statutory conditions of note issue by banks in England and Wales other than the Bank of England are :—

1. By Act of 1826, 7 Geo. IV, cap. 6, notes under 5*l.* are prohibited.

2. By Act of 1826, 7 Geo. IV, cap. 46, which authorised the establishment of joint stock banks of issue, they are prohibited from having any house of business or establishment as bankers in or within sixty-five miles of London.

The remaining conditions are prescribed by the Act of 1844.

3. No bank not a bank of issue on 6th of May, 1844, shall make or issue bank notes in any part of the United Kingdom.

4. A bank ceasing to issue its notes may not resume.

5. Each bank must make a weekly return of the daily amount of its notes in circulation, showing the weekly average, and the return at the end of each fourth week must show the average for the four weeks, such average being the aggregate of the notes in circulation on every business day of the four weeks divided by the number of such business days.

6. No bank shall have in circulation upon an average of four weeks a greater amount of notes than the amount of its authorised issue, under the penalty of forfeiting a sum equal to the excess.

7. Private banks on amalgamation may retain the aggregate authorised issues of the separate banks, provided the number of

partners in the united bank do not exceed six. No joint stock bank can add to its authorised issue by amalgamation with any other bank of issue, joint stock or private; and the issues of banks which are absorbed by a joint stock bank are *eo ipso* forfeited. This provision places joint stock banks of issue at an unjust disadvantage with private banks of issue.

8. The Commissioners of Stamps and Taxes have power, with consent of the Treasury, to cause the books of banks containing accounts of their note circulation to be inspected, under a penalty of 100*l.* for every refusal to permit such inspection. This power has never, I believe, been exercised.

9. The Bank of England may arrange to allow any bank of issue a composition of 1 per cent. per annum on the amount of Bank of England notes which such bank may issue and keep in circulation, as a consideration to that bank for the relinquishment of its right of issue, such composition not exceeding 1 per cent. per annum on the amount of authorised circulation relinquished.

10. Her Majesty in Council may from time to time authorise the Bank of England to increase the amount of its issues against securities to the extent of not more than two-thirds of the lapsed issues of other banks. In virtue of this provision the issues of the Bank of England against securities have been successively increased from 14 millions in 1844, to 15 millions at the present time.

Several of these conditions were manifestly designed to promote the absorption of the country issues, and it will be instructive to trace how far they have operated in that direction.

The following table shows the number of banks of issue in England by the Act of 1844, with the amount of their authorised issue, the number and amount of issues lapsed, and the amount of those remaining.

TABLE LXIV.—*England and Wales. Issues Authorised by Act of* 1844, *since Lapsed, and now Remaining, December*, 1875.

Authorised Issues.	Private Banks.		Joint Stock Banks.		Together.	
	Number.	Authorised Issue.	Number.	Authorised Issue.	Number.	Authorised Issue.
		£		£		£
By Act of 1844	207	5,153,407	72	3,495,446	279	8,648,853
Since ceased to issue	89	1,345,415	18	842,453	107	2,187,868
Amalgamated without loss of issue	6	—	—	—	6	—
	95	—	—	—	113	—
Remaining	112	3,807,992	54	2,652,993	166	6,460,985

The diminution in the number of issuers since 1844 is 43 per cent. of the private issuers, 25 per cent. of the joint stock, and 38 per cent. of the total.

Twenty-five per cent. of the total amount of issue authorised by the Act of 1844, has lapsed in thirty-one years; 26 per cent. being the proportion lapsed in the case of the private banks, and 24 per cent. in the case of the joint stock banks. The average authorised issue per bank was in

	Private Banks.	Joint Stock Banks.
	£	£
1844	24,895	48,548
'75 (December)	34,000	49,130

It will be interesting to tabularise the lapsed issues according to the causes of their forfeiture, and this is done in the following table, compiled from the Banking Almanacs:—

TABLE LXV.—*England and Wales. View of Lapsed Issues*, 1844-75, *Classified according to the Causes of their Forfeiture.*

[Compiled from the Banking Almanacs.]

Cause.	Private Banks.			Joint Stock Banks.			Together.		
	Number of Issuers.	Amount of Authorised Issue.	Percentage of Total Lapsed Authorised Issue.	Number of Issuers.	Amount of Authorised Issue.	Percentage of Total Lapsed Authorised Issue.	Number of Issuers.	Amount of Authorised Issue.	Percentage of Total Lapsed Authorised Issue.
		£	Per ent.		£	Per cnt.		£	Per cnt.
1. Bankrupt or stopped payment	33	547,321	41	2	48,101	6	35	595,422	27
2. Closed or dissolved	10	84,741	6	7	169,589	20	17	254,330	12
Together	43	632,062	47	9	217,690	26	52	849,752	39
3. Ceased to issue (no reason named)	6	82,592	6	—	—	—	6	82,592	4
4. Arranged to issue Bank of England notes	12	194,992	15	—	—	—	12	194,992	9
5. Opened in London	—	—	—	1	442,371	52	1	442,371	20
6. Amalgamated or transferred business	28	435,759	32	8	182,392	22	36	618,151	28
	89	1,345,405	100	18	842,453	100	107	2,187,858	100

It will be seen from this table that of the total amount of issues lapsed, 39 per cent. have been extinguished by bankruptcy or dissolution; 9 per cent. have been relinquished by arrangement with the Bank of England; 4 per cent. have been given up without reason assigned; 20 per cent. have been forfeited by a joint stock bank, the National Provincial, opening in London, and 28 per cent. have been forfeited by amalgamation.

It will also be seen that of the amount of joint stock issues lapsed, 74 per cent. have been compulsorily forfeited under the Act, and 26 per cent. by bankruptcy or dissolution; whilst of the amount of private bank issues lost, 32 per cent. have been forfeited compulsorily under the Act; 21 per cent. have been given up voluntarily, and 47 per cent. have lapsed by bankruptcy or dissolution. These figures show that even with the disadvantage under which they rest in respect of amalgamation, there has been greater permanency in the issues of the joint stock than in those of the private banks.

The amount of authorised issue lapsed in each period of five years since 1844, and in the two years 1874-75, has been as follows:—

Years.	Date.	Authorised Issue Lapsed.
		£
5	1844–48	423,410
5	'49–53	282,981
5	'54–58	234,174
5	'59–63	173,212
5	'64–68	753,814*
5	'69–73	157,099
2	'74–75	163,178
		2,187,868

* Including National Provincial Bank of England, 442,371*l.*

It is most improbable that the issues would continue to lapse at the same rate, because when the weaker have been eliminated the stronger will show greater permanency; but even if the same rate be assumed it would take ninety-three years to clear off the issues now remaining. This shows a stability on the part of the English country issues which, could he have foreseen it, might have materially modified Sir Robert Peel's views.

Statutory Conditions of Note Issue in Scotland.

The conditions under which the Scotch banks enjoy the privilege of issue are:—

1. They retain the 1*l.* note abolished in England in 1826.

2. They have, by the Act of 1844, a monopoly of issue in Scotland.

3. Banks amalgamating retain the aggregate fixed issues of the separate banks.

4. Banks may exceed the amount of their fixed issue to any extent on condition of holding at their head office gold and silver coin equal in amount, on the average of each four weeks, to the average excess of their note circulation during these four weeks —silver coin held in excess of one fourth of the gold coin held not being reckoned as a basis for any excess of fixed issues.

5. A weekly return is required of (1) the amount of notes in circulation at the close of business on Saturday. (2) The amount of gold and silver coin held at head office at the close of business on each day of the week. (3) The total amount of gold and silver coin in Scotland held by the bank at the close of business on Saturday. Every fourth week must be added (1) the average of the amount of notes in circulation at the close of business on each of the four Saturdays. (2) The average of the amount of coin held at the head office on each of the four Saturdays.

6. For any issues in excess of the provisions of the Act, the penalty is the forfeiture of a sum equal to the excess.

7. Bank of England notes are not a legal tender in Scotland.

8. The Commissioners of Stamps and Taxes have power, with consent of the Treasury, to cause the bank's books containing accounts of notes in circulation and of coin held to be inspected, under a penalty of 100*l.* for refusal.

The variations in the number and amount of the fixed issues under the Act of 1845 have been as under:—

Authorised Issues.	Number of Banks.	Amount of Fixed Issues.
		£
By Act of 1845	19	3,087,209
Reduction by amalgamation	6*	—
,, failure of Western Bank, which included issue of Ayrshire Bank	2	337,938
	8	
Remaining, December, 1875	11	2,749,271

* The fixed issue of these six banks retained, notwithstanding amalgamation, amounted to 373,800*l.*

Statutory Conditions of Note Issue in Ireland.

The statutory conditions under which the banks of issue enjoy that privilege in Ireland are as follows:—

1. The Act of 1844 prevents the establishment of any new bank of issue.

2. Notes under 5*l.*, abolished in England in 1826, are retained in Ireland.

3. The notes of each bank are payable in gold at every one of its branches.

4. The Bank of England note is not a legal tender in Ireland.

5. Banks amalgamating retain the aggregate fixed issues of the separate banks.

6. Banks may issue to any extent beyond the amount of their fixed issue on holding at their head offices or principal places of issue, on the average of each four weeks, gold and silver coin equal in amount to such excess of issue, not reckoning silver coin to a greater extent than one-fourth of the gold coin held.

7. The returns of circulation and coin held are the same as those required from the Scotch banks, but the head offices or principal places of issue at which coin held may be reckoned against circulation may be not more than four for each bank, of which not more than two shall be situated in the same province.

8. The power of inspection by the Commissioners of Stamps and Taxes, and the penalty upon excess of circulation beyond the provisions of the Act, are the same as in Scotland.

The number of banks of issue in Ireland, eight in 1845, has been diminished to six by amalgamation, but the amount of authorised fixed credit issue remains as it was in 1845, 6,354,494*l.*

Advantages of Scotch and Irish Banks of Issue over English Country Banks of Issue.

The advantages which the Scotch and Irish banks of issue possess over the English country banks of issue may be thus briefly summarised:—

1. Notes under 5*l.* are prohibited in England but permitted in Scotland and Ireland. In Scotland the 1*l.* note constitutes 66 per cent. of the total circulation. In Ireland where notes of 3*l.* and 2*l.* as well as 1*l.* are used, the small notes form 45 per cent. of the total note circulation. (See Mr. Palgrave's tables.) This gives especially to the Scotch banks and to the Scotch nation a great economy of coin in circulation not enjoyed in England.

2. The issues of Scotland and Ireland are not subjected to the competition of the legal tender notes of any State bank, whilst the country issues of England have to hold their ground side by side

with the notes of the Bank of England, which being legal tender are practically obligations of the State.

3. An English bank cannot under a penalty allow its average daily circulation for each four weeks to exceed the amount of its authorised issue, whilst a Scotch or an Irish bank can issue to any extent, provided merely it holds coin equal to the excess of its authorised issue. This is a tremendous advantage, and gives all the Scotch and several of the Irish banks the benefit of a permanent excess of their fixed issues, as well as the command of an unlimited amount of till money at their numerous branches in their own notes, on which they suffer no loss of interest and pay no stamp duty. The amount of till money so held in Scotland at the eight hundred and eighty-four offices of the banks cannot be less than 6,000,000*l*. An English bank of issue, whose circulation is nearly or quite up to its authorised amount has little or no command of till money in its own notes.

Moreover, the coin held by the Scotch and Irish banks in conformity with the requirements of the law is in no way hypothecated as a security for excess of issues, and in the event of failure must be applied as any ordinary asset towards payment of all the liabilities of the bank. In the course of his evidence before the Committee on Banks of Issue, 1875, Mr. Readman, manager of the Clydesdale Banking Company, in reply to Mr. Backhouse's question, "Would you think it desirable that less gold should be "retained in Scotland if they were not obliged to keep gold against "their excess of issue?" said, "We should not, I think, keep less "gold than we do even if we were not obliged by Act of Parliament "to keep gold against the excess of issue." The total liabilities to the public of the Scotch banks are 92½ millions. They hold 4,000,000*l*. in coin, which is equal to 4⅓ per cent. of their liabilities. This, it will be admitted, is a very moderate legal tender reserve against such enormous liabilities. Yet it is permitted to do duty, not only as a reserve, but also as the basis, and a most illusory basis it is, for an excess amounting on the average of 1874 to 3,150,000*l*. beyond the fixed or credit issue.

In Ireland the total liabilities of the banks of issue were at 31st December, 1874, 42,500,000*l*. The average amount of coin held by them in 1874 was 2,798,000*l*., or 6½ per cent. of their liabilities. Their authorised issue being so very large compared with that of the Scotch banks, their excess of issue is always very much less than the excess in Scotland. The fact that their notes are by law payable in coin at all their branches amply accounts for the much larger proportion of coin which they hold in comparison with the Scotch banks. It will be seen from the following table that the coin held beyond the legal requirements is only 958,000*l.* in Scotland, against 2,384,000*l.* in Ireland, and that the coin held bears the ratio to the excess of credit issue of 130 per cent. in Scotland, and 676 per cent. in Ireland.

TABLE XLVI.—*Scotch and Irish Banks, Average Excess of Issue, and Coin Held*, 1874.

1874.	Scotch.	Irish.
	£	£
Average actual circulation	5,900,000	6,769,000
Authorised or credit circulation	2,749,271	6,354,494
Average excess of issue	3,150,000	414,000
" coin held	4,108,000	2,798,000
Coin held beyond legal requirements	958,000	2,384,000
	Per cnt.	Per cnt.
Ratio of coin held to excess of issue	130	676

4. The English banks have to return their circulation on the basis of a monthly average of *daily* amounts. The Scotch and Irish banks have the benefit of a monthly average of *weekly* amounts; and as the return is made at the close of business on Saturday, on which day exchanges of notes take place between the banks all over Scotland, the Scotch circulation is then at its minimum. Mr. Readman gave it in evidence before the Committee on Banks of Issue, 1875, that the circulation of the Clydesdale Bank being 717,000*l.* before the exchange, would be reduced by probably 200,000*l.* at the exchange; and in answer to Mr. Backhouse's question—" May I conclude from that answer that if we had the " circulation of all the Scotch banks before the exchange, it would " amount to something like 2,000,000*l.* more than is shown after " the exchange?" he said, " It would amount to a very considerably " larger sum at the half-yearly terms in May and November." There is in fact no doubt that the Scotch banks have the use in circulation of a sum in notes exceeding one third of their average annual circulation, without either paying stamp duty on such sum, or being required to hold coin in respect of it. Of course these notes are not in the hands of the ordinary public. They are in the hands of the other banks awaiting exchange, and if the banks went to the trouble and expense of having an exchange of notes at the close of business each day, they might work without this temporary additional excess of issues. The law, however, saves them this trouble and expense by giving them, on five days of the week, the power of unlimited issue without regard to amount of coin held, and without payment of stamp duty on the excess. There is very little doubt that, including unexchanged notes in the hands of other banks, the

normal amount of the Scotch circulation is actually on five days of the week in excess of the sum of the fixed issue and the amount of coin held.

5. In England the restrictions upon amalgamation of issues have operated to prevent the consolidation of issues, and have led, as has been shown, to the forfeiture of an appreciable proportion of the authorised circulation. In Scotland and Ireland there are no such restrictions; and in both, but more extensively in Scotland, amalgamations have been effected without diminution of the amount of authorised issue, an advantage to the banks and the public not possessed in England. In Scotland the six banks incorporated with the eleven existing banks had a fixed credit issue amounting to 373,800*l.*, and it is certain that but for the privilege of amalgamating issues, the greater portion of that sum of credit issue would have been lost to the banks and the country. In England, whilst it is curious to observe in passing, that one bank, the Ludlow and Tenbury Bank, has had the ingenuity to retain its existence as a bank of issue, notwithstanding the transference of its ordinary banking business to the Worcester City and County Bank, it is found that the authorised issue lost by amalgamations amounts to 618,151*l.*, or 7 per cent. of the issue originally authorised by the Act of 1844. It may further be held as certain that many banking amalgamations would have taken place in England but for the penalty of loss of circulation, and thus the natural and desirable consolidation of the country bank system has been repressed and hampered by this pernicious provision of the law.

6. In Scotland the monopoly of issue has practically produced a monopoly of banking in favour of the existing banks. No such monopoly of banking exists in Ireland, where there are three joint stock banks of non-issue; nor in England, where there are amongst the purely provincial banks, eighty-three private and forty-three joint stock banks, which are not banks of issue. Several of the Scotch members of the committee, and notably Mr. Orr Ewing, argued in questions put to various witnesses that the actual monopoly of banking in Scotland must arise not from the monopoly of issue, but from the undoubted stability of the banks, the complete manner in which they covered the ground with their branches, and the liberal terms on which they conducted their business; because under similar circumstances in Ireland three joint stock banks of non-issue were carried on successfully side by side with the six privileged banks of issue.

In reply to this argument it may be stated that the privileges of the Irish banks of issue, though similar to those of the Scotch banks, are not so valuable. Their notes being by law payable at all their branches, they have to hold a stock of coin at every office, a condition from which the Scotch banks are exempt. Again, there were in Scotland in 1844 no established banks of non-issue, whereas in Ireland, the Hibernian Bank, established in 1825, and the Royal Bank of Ireland, established in 1836, were successfully carrying on business as banks of non-issue, when the monopoly of issue was decreed in 1844.

Distribution and Actual Position of Non-Legal-Tender Note Circulation in United Kingdom.

TABLE LXVII.—*Distribution of Non-Legal-Tender Note Circulation.*
[Based on Mr. Palgrave's Tables.]

Banks.	Authorised Circulation.	Average Authorised Circulation per Bank.	Average Circulation, 1874.	Average Circulation per Bank, 1874.
ENGLAND AND WALES.	£	£	£	£
113 private banks	3,845,908	34,034	2,600,000	23,009
54 joint stock banks	2,662,707	49,309	2,360,000	43,700
167 banks	6,508,615	38,973	4,960,000	29,640
SCOTLAND.				
11 joint stock banks	2,749,271	249,934	5,900,000	536,300
IRELAND.				
1 Bank of Ireland	3,738,428	3,738,428	2,879,000	2,879,000
5 other joint stock banks	2,616,066	523,213	3,890,000	778,000
6 joint stock banks	6,354,494	1,059,082	6,769,000	1,128,200

Even allowing for the absence of small notes in England, these figures show that in that division of the United Kingdom the right of issue is much more diffused and in smaller hands than in either Scotland or Ireland.

This discrepancy is purely the result of legislation. In Scotland from 1716 to 1844, banking, including the issue of small notes, was entirely unfettered by law. This freedom led to the establishment and development of joint stock banks on a large scale. In Ireland banking and issue were exclusively in private hands until the establishment of the Bank of Ireland, by statute of 1782, which conferred on that bank the monopoly of joint stock banking in Ireland—a monopoly continued until 1821, when powers of banking and issue were extended to any partnership in Ireland exceeding six persons, provided they had no place of business in Dublin or within a circuit of sixty-five English miles round that city. In 1844 issue was restricted to banks then exercising that function, but it appears that ere that time the issue of notes by private bankers in Ireland had died a natural death.

In England the monopoly of joint stock banking, conferred on the Bank of England, and jealously upheld till 1826, confined the country issues to private bankers having not more than six partners, and kept the country banking of England essentially local and comparatively weak, whilst the banking of Scotland was growing national and strong. In 1826 joint stock banking with the power of issue was legally sanctioned in England under certain restrictions which were somewhat relaxed in 1833. From that time till 1844, when Sir Robert Peel laid an iron hand on the country issues, joint stock banking had not time to develope itself in England, and the financial troubles of 1836 to 1840 contributed to retard its infant growth.

Thus it is that whilst in Scotland, and to a certain extent in Ireland also, the issues emanate from banks which are almost national in their importance as well as in the extent of their ramifications, in England, on the other hand, the issuing banks, since the National Provincial Bank of England ceased to belong to that class, are all such as restrict their operations, including the circulation of their notes, to districts more or less circumscribed.

The following table will illustrate this:—

TABLE LXVIII.—*United Kingdom. Banks of Issue. Actual Circulation per Bank*, 1874.

Locality.	Lowest Actual Circulation per Bank.	Highest Actual Circulation per Bank.	Average Actual Circulation per Bank.
England and Wales—	£	£	£
Private	1,825	125,937	23,000
Joint stock	1,191	311,641	43,700
Together	1,191	311,641	29,640
Scotland	104,000	789,000	536,300
Ireland	476,000	2,879,000	1,128,200

These figures, as well as the following tables, are based upon copious tables prepared no less intelligently than laboriously by Mr. R. H. Inglis Palgrave for the Committee on Banks of Issue, and subsequently re-published in the "Bankers' Magazine" for 1875, and the "Banking Almanac" for 1876.

In Table LXIX the joint stock banks, and in Table LXX the private banks, are classified according to the amount of the actual circulation of each bank on the average of the year 1874.

TABLE LXIX.—*England and Wales. Joint Stock Banks of Issue, Classified according to Amount of Actual Average Circulation*, 1874.
[Compiled from Mr. Palgrave's Tables.]

Bank.	Authorised Issue.	Average Circulation, 1874.
	£	£
Under 10,000*l.*		
1. Barnsley Banking Company	9,563	8,968
2. Chesterfield and North Derby	10,421	9,868
3. County of Stafford	9,418	9,047
4. Whitchurch and Ellesmere	7,475	4,371
5. Ludlow and Tenbury	10,215	8,769
6. Worcester City and County	6,848	1,191
7. Helston Banking Company	1,503	1,494
	55,443	43,708
Above 10,000*l. and not above* 25,000*l.*		
1. Carlisle City and District	19,972	19,857
2. ,, and Cumberland	25,610	24,826
3. Bank of Westmoreland	12,225	10,611
4. Bradford Commercial	20,084	19,786
5. Halifax Joint Stock	18,534	17,391
6. ,, Commercial, *Limited*	13,733	12,440
7. Wakefield and Barnsley Union	14,604	13,906
8. Sheffield and Hallamshire	23,524	22,748
9. Derby and Derbyshire	20,093	19,351
10. Coventry Union	16,251	15,034
11. ,, and Warwickshire	28,734	16,581
12. Leamington Priors, &c.	13,875	11,417
13. Northamptonshire Banking Company	26,401	18,629
14. Wolverhampton and Staffordshire	35,378	18,333
	289,018	240,910
Above 25,000*l. and not above* 50,000*l.*		
1. Cumberland Union, *Limited*	35,395	33,967
2. Bank of Whitehaven, *Limited*	32,681	30,136
3. Whitehaven Joint Stock	31,916	28,546
4. Darlington District	26,134	25,592
5. Knaresborough and Claro	28,059	26,680
6. Bradford Banking Company	49,292	48,586
7. Hull Banking Company	29,333	28,897
8. Halifax and Huddersfield Union	44,137	37,243

Table LXIX.—*England and Wales. Joint Stock Banks of Issue—Contd.*

Bank.	Authorised Issue.	Average Circulation, 1874.
	£	£
Above 25,000l. and not above 30,000l.—Contd.		
9. Huddersfield Banking Company	37,354	35,551
10. West Riding Union	34,029	33,465
11. Sheffield Banking Company	35,843	35,530
12. Burton and Uttoxeter	60,701	46,257
13. Nottingham and Notts	29,477	25,603
14. Moore and Robinson's, *Limited*	35,813	30,587
15. Lincoln and Lindsay	51,620	49,778
16. Stamford, Spalding, &c.	55,721	49,897
17. Stourbridge and Kidderminster	56,830	48,303
18. North Wilts Banking Company	63,939	37,982
	738,274	652,600
Above 50,000l. and not above 75,000l.		
1. North and South Wales	63,951	59,698
2. Lancaster Banking Company	64,311	59,342
3. Swaledale and Wensleydale	54,372	51,080
4. York Union	71,240	69,965
5. Sheffield and Rotherham	52,496	51,305
6. Pares's Leicestershire	59,300	54,043
7. Leicestershire Banking Company	86,060	65,786
8. Northamptonshire Union	84,356	58,172
9. Wilts and Dorset	76,162	73,356
	612,248	542,747
Above 75,000l. and not above 100,000l.		
1. York City and County	94,695	90,911
2. West of England and South Wales District	83,535	81,256
3. County of Gloucester	144,352	91,615
	322,582	263,782
Above 100,000l.		
1. Yorkshire Banking Company	122,532	119,113
2. Stuckey's ,,	356,976	311,641
3. Gloucestershire ,,	155,920	144,145
	635,428	574,899

TABLE LXX.—*England and Wales. Private Banks of Issue Classified according to Amount of Average Circulation*, 1874.
[Compiled from Mr. Palgrave's Tables.]

Local Name of Bank.	Name of Firm.	Authorised Issue.	Average Circulation 1874.
Under 10,000*l.*		£	£
1. Richmond Bank	Roper and Priestman	6,889	6,676
2. Loughborough Bank	Middleton and Co.	7,359	6,876
3. Godalming Bank	Mellersh ,,	6,322	5,472
4. Faversham ,,	Hilton and Rigden	6,681	5,630
5. Bury St. Edmund's Bank	Worlledge and Co.	3,201	2,672
6. Penzance Bank	Batten ,,	11,405	8,208
7. Harwich ,,	Cox and Co.	5,778	4,133
8. Lynn R. and Norfolk Bank	Jarvis ,,	13,917	9,854
9. Wellington Bank, Somerset	Fox ,,	6,528	4,088
10. Yarmouth, Norfolk, and Suffolk Bank	Lacons ,,	13,229	8,378
11. Tavistock Bank	Gill, Sons, and Co.	13,421	8,158
12. Thornbury (Gloucester) Bk.	Harwood ,,	10,026	6,102
13. Macclesfield Bank	Brocklehurst and Co.	15,760	9,525
14. Union Bank, Helston	Vivian, and Co., Helston.	17,003	9,781
15. Witney (Oxon) Bank	J. Williams, Clinch, and Sons	11,852	6,553
16. Devonport Bank	Hodge and Co.	10,664	5,419
17. Lymington ,,	S. Barbe ,,	5,038	2,565
18. Royston ,,	J. G. Fordham and Sons.	16,393	8,015
19. Tiverton and Devonshire Bk.	Dunsford and Co.	13,470	6,157
20. Towcester Old Bank	Mercer and Co.	10,801	4,760
21. Oswestry Bank	Croxon ,,	18,471	7,603
22. Farnham ,,	J. Knight and Sons	14,202	5,662
23. Sittingbourne and Milton Bk.	Vallance and Co.	4,789	1,825
24. Winchester, Alresford, and Alton	Bulpett and Co.	25,892	8,872
25. Wivilescombe	W. Hancock	7,602	2,365
26. Southampton Tn. and Cnty.	Maddison and Co.	25,359	7,620
27. New Sarum Bank	Pinckney Brothers	15,659	4,582
28. Wallingford ,,	Hedges and Co.	17,064	4,631
29. Rye Bank	Curteis ,,	29,864	7,231
30. Uxbridge Old Bank	Hull ,,	25,136	5,982
31. Devizes and Wiltshire Bank	Locke ,,	20,674	4,659
32. Barnstaple Bank	Marshall ,,	17,182	3,884
33. Salop Bank	Burton ,,	22,338	4,681
34. Monmouth Old Bank	Bromage ,,	16,385	2,720
		466,354	201,339
Above 10,000*l. and not above* 25,000*l.*			
1. Hull and Kingston-on-Hull	S. Smith Brothers and Co.	19,979	19,659
2. Scarborough Old Bank	Woodall and Co.	24,813	24,331
3. Burlington and Driffield Bk.	Harding ,,	12,745	12,328
4. Whitby Old Bank	Simpson ,,	14,258	13,791
5. Miners' Bank	Willyams ,,	18,688	18,135
6. Thrapstone and Kettering	Eland and Eland	11,559	11,030
7. Tring and Chesham	T. Butcher and Sons	13,531	12,254
8. Ashford Bank	Pomfret and Co.	11,849	10,652
9. Knaresborough Old Bank	Harrison ,,	21,825	19,559
10. Derby Bank	Evans ,,	13,332	11,073
11. Tonbridge Old Bank	H. S., A. T., and A. Beeching	13,183	10,886

TABLE LXX.—*Private Banks of Issue Classified—Contd.*

Local Name of Bank.	Name of Firm.	Authorised Issue.	Average Circulation, 1874.
Above 10,000l. and not above 25,000l.—Contd.		£	£
12. Kentish Bank	Wigan and Co.	19,895	16,132
13. Shrewsbury and Welchpool	Beck ,,	25,336	20,097
14. Guildford Bank	Haydon ,,	14,524	11,221
15. Warwick and Warwickshire	Greenway and Co.	30,504	22,919
16. Naval Bank, Plymouth	Harris and Co.	27,321	20,841
17. Leicester Bank	T. and T. T. Paget	32,322	24,644
18. Kingston and Radnorshire	Davies and Co.	26,050	19,045
19. Ipswich Bank	Bacon ,,	21,901	15,195
20. Llandovery and Llandilo Bk.	D. Jones ,,	32,945	22,651
21. Weymouth Old Bank	Eliot ,,	16,461	11,150
22. Newark Bank	Godfrey and Riddell	28,788	19,654
23. Newmarket Bank	Hammond and Co.	23,098	15,254
24. Grantham ,,	Hardy and Co.	30,372	19,272
25. Buckingham ,,	Bartlett ,,	29,657	18,224
26. Canterbury ,,	Hammond and Co.	33,671	20,418
27. Brighton Union Bank	Hall, Lloyd, ,,	33,794	19,041
28. City Bank, Exeter	Milford, Snow, and Co.	21,527	11,631
29. Lewes Old Bank	Whitfield and Co.	44,836	24,284
30. Broseley and Bridgnorth Bk.	Pritchard ,,	26,717	14,182
31. Reading Bank	Simonds ,,	37,519	19,881
32. Banbury ,,	J. C. and A. Gillett	43,457	22,098
33. Shrewsbury Old Bank	Rocke, Eyton, and Co.	43,191	22,123
34. Cambridge Bank	Mortlock and Co.	25,744	12,784
35. Bicester and Oxfordshire Bk.	G. and H. Tubb	27,090	13,146
36. Colchester Bank	Round, Green, and Co.	25,082	11,885
37. Exeter ,,	Sanders and Co.	37,894	17,124
38. Aylesbury Old Bank	T. R. Cobb ,,	48,461	21,397
39. Baldock and Biggleswade Bk.	Wells, Hogge, and Co.	37,223	16,581
40. Stamford and Rutland Bank	Eaton and Co.	31,858	12,402
41. Bristol Bank	Miles ,,	48,277	19,062
42. Saffron Walden and N. Essex	Gibson ,,	47,646	18,366
43. Newbury Bank, Berks	Matthews and Co.	36,787	12,247
44. Banbury Old Bank	Cobb and Son	55,153	16,751
		1,240,863	745,400
Above 25,000l. and not above 50,000l.			
1. Pease's Old Bank, Hull	Pease, Hoare, and Co.	48,807	48,515
2. Derby Old ,,	Crompton and Co.	27,237	26,684
3. Leeds Union ,,	Williams, Brown, and Co.	37,459	36,834
4. Nottingham ,,	S. Smith and Co.	31,047	30,029
5. Kendal Bank	Wakefield ,,	41,663	43,245
6. W. Riding Bank, Wakefield	Leatham, Tew, and Co.	46,158	43,345
7. Leighton Buzzard Bk. Beds	Basset and Co.	36,829	33,011
8. Bedford Bank	T. Barnard and Co.	34,218	29,795
9. Cambridge and Cambsh. Bk.	Foster and Foster	49,916	42,703
10. Oxford Old Bank	Parson and Co.	34,391	29,228
11. York Bank	Swann ,,	46,387	39,606
12. Newark and Sleaford Bank	Handley ,,	51,615	42,605
13. Derby Bank	Smith ,,	41,304	32,969
14. Hitchin Bank, Herts	Sharples ,,	38,764	30,620
15. Dorchester Old Bank	Williams ,,	48,807	35,768

TABLE LXX.—*Private Banks of Issue Classified—Contd.*

Local Name of Bank.	Name of Firm.	Authorised Issue.	Average Circulation, 1874.
Above 25,000l. and not above 50,000l.—Contd.			
16. Brecon Old Bank	Wilkins and Co.	68,271	44,945
17. Yarmouth and Suffolk Bank	Gurneys ,,	53,060	34,463
18. Lynn R. and Lincolnsh. ,,	,, ,,	42,817	26,477
19. Wisbech and Lincolnsh. ,,	,, ,,	59,713	35,467
20. Reading Bank	Stephens ,,	43,271	25,018
21. Cornish ,,	Tweedy ,,	49,869	28,424
22. Ipswich and Needham Mrkt.	Alexanders and Co.	80,699	43,829
23. Bury and Suffolk Bank	Oakes and Co.	82,362	44,116
24. Colchester and Essex Bank	Mills ,,	48,704	25,664
25. Essex and Bishop Stortford	Sparrow ,,	69,637	36,255
26. Worcester Old Bank	Berwick ,,	87,448	44,441
27. Huntingdon Town and Cnty.	Veasey ,,	56,591	26,881
		1,360,044	960,937
Above 50,000l. and not above 75,000l.			
1. East Riding Bank	Beckett and Co.	53,392	52,071
2. Craven Bank	Birkbeck ,,	77,154	74,005
3. Boston ,,	Claypon, Garfit, and Co.	75,069	59,851
		205,615	185,927
Above 75,000l. and not above 100,000l.			
1. Darlington Bank	J. Backhouse and Co.	86,218	84,789
2. Lincoln ,,	Smith, Ellison, ,,	100,342	91,074
3. Norwich and Norfolk Bank	Gurneys and Co.	105,519	81,720
4. East Cornwall Bank	Robin ,,	112,280	81,131
		404,359	338,714
Above 100,000l.			
1. Leeds Bank	Beckett and Co.	130,757	125,937

The results of these two tables will be seen at a glance in Table LXXI, from which it may be calculated that 86 per cent. in number, and 58 per cent. in amount of the English issues are in sums of under 50,000*l.* each; whereas the smallest actual circulation in Scotland is 104,000*l.*, and the smallest in Ireland is 476,000*l.*

TABLE LXXI.—*England and Wales. Banks of Issue, Joint Stock, and Private. Actual Circulation of* 1874, *Classified according to Amount for each Bank.*

Classification.	Joint Stock. Number of Banks.	Joint Stock. Aggregate Authorised Issue.	Joint Stock. Aggregate Average Issue.
Under 10,000*l.*	7	55,443	43,708
Above 10,000*l.* and under 25,000*l.*	14	289,018	240,910
,, 25,000*l.* ,, 50,000*l.*	18	738,274	652,600
,, 50,000*l.* ,, 75,000*l.*	9	612,248	542,747
,, 75,000*l.* ,, 100,000*l.*	3	322,582	263,782
,, 100,000*l.*	3	635,428	574,899
	54	2,652,993	2,318,646
Average	—	49,129	42,938

Classification.	Private Banks. Number of Banks.	Private Banks. Aggregate Authorised Issue.	Private Banks. Aggregate Average Circulation.
Under 10,000*l.*	34	466,354	201,339
Above 10,000*l.* and under 25,000*l.*	44	1,240,863	745,400
,, 25,000*l.* ,, 50,000*l.*	27	1,360,044	960,937
,, 50,000*l.* ,, 75,000*l.*	3	205,615	185,927
,, 75,000*l.* ,, 100,000*l.*	4	404,359	338,714
,, 100,000*l.*	1	130,757	125,937
	113	3,807,992	2,558,254
Average	—	33,699	22,639

Classification.	Total. Number of Banks.	Total. Aggregate Authorised Issue.	Total. Aggregate Average Issue.
Under 10,000*l.*	41	521,797	245,047
Above 10,000*l.* and under 25,000*l.*	58	1,529,881	986,310
,, 25,000*l.* ,, 50,000*l.*	45	2,098,318	1,613,537
,, 50,000*l.* ,, 75,000*l.*	12	817,863	728,674
,, 75,000*l.* ,, 10,0000*l.*	7	726,941	602,496
,, 100,000*l.*	4	766,185	700,836
	167	6,460,985	4,876,900
Average	—	38,688	29,203

As the paid-up capital may be assumed to be a rough and ready test of the magnitude of a bank, I have prepared the following tables, in which the authorised circulation and the actual average circulation for 1874 as worked out by Mr. Palgrave, are brought into juxtaposition and comparison with the paid-up capital in the case of each bank.

TABLE LXXII.– *English Joint Stock Banks of Issue. Relation of Authorised Issues and Actual Circulation to Paid-up Capital*, 1874.

[Cols. 2 and 3 are compiled from Mr. Palgrave's Tables.]

Number.	Name. [Banks printed in SMALL CAPITALS publish Balance Sheets.]	1 Authorised Issue.	2 Average Issue in 1874.	3 Ratio of Actual to Authorised Issue.	4 Number of Offices.	5 Paid-up Capital.	6 Ratio of Authorised Issue to Paid-up Capital.	7 Ratio of Actual Circulation to Paid-up Capital.
		£	£	Per cnt.	No.	£	Per cnt.	Per cnt.
1	CARLISLE CITY AND DIST.	19,972	19,857	99	6	80,162	25	25
2	CARLISLE AND CUMBLAND.	25,610	24,826	97	6	75,000	34	33
3	CUMBLAND. UNION *Ltd.*....	35,395	33,967	96	18	225,000	16	15
4	B. OF WHITEHAVEN, *Ltd.*	32,681	30,136	92	4	98,530	33	31
5	Whitehaven Joint Stock	31,916	28,546	89	6	45,000	71	63
6	Bank of Westmoreland	12,225	10,611	87	2	25,680	47	41
7	N. AND S. WALES BANK	63,951	59,698	93	37	420,000	15	14
8	Lancaster Banking Co.	64,311	59,342	92	14	275,000	23	22
9	Darlington District Bank...	26,134	25,592	97	8	68,000	38	38
10	SWALEDLE AND WENSLEYD	54,372	51,080	94	4	63,000	86	80
11	Knaresborough and Claro..	28,059	26,680	95	6 {	not stated	not known	not known
12	YORKSHIRE BKG. CO.	122,532	119,113	97	22	250,000	49	48
13	York City and County	94,695	90,911	96	15	125,000	76	73
14	York Union	71,240	69,965	98	10	132,000	54	53
15	Hull Banking Company	29,333	28,897	98	4	90,990	32	32
16	BRADFORD COMMERCIAL	20,084	19,786	98	1	193,500	10	10
17	BRADFORD BKG. CO.	49,292	48,586	98	1	408,000	12	12
18	Halifax Joint Stock Bank..	18,534	17,391	94	3	150,000	12	12
19	HALIFAX COMM., *Limited*..	13,733	12,440	90	2	120,000	11	10
20	Halifax and Hudders. Un.	44,137	37,243	84	2	250,000	18	15
21	Huddersfield Bkg. Co.........	37,354	35,551	95	4	382,500	10	9
22	West Riding Union Bank	34,029	33,465	98	3	200,000	17	17
23	Wakefield & Barnsley Un.	14,604	13,906	95	3	100,000	15	14
24	Barnsley Banking Co.	9,563	8,968	94	2	40,575	23	22
25	SHEFFIELD AND ROTHERM.	52,496	51,305	98	5	160,704	33	32
26	SHEFFIELD BANKING CO.	35,843	35,530	99	4	293,160	12	12
27	SHEFFIELD AND HALLAMSH.	23,524	22,748	97	1	183,200	13	12

TABLE LXXII.—*English Joint Stock Banks of Issue—Contd.*

Number.	Name. [Banks printed in SMALL CAPITALS publish Balance Sheets.]	1 Authorised Issue.	2 Average Issue in 1874.	3 Ratio of Actual to Authorised Issue.	4 Number of Offices.	5 Paid-up Capital.	6 Ratio of Authorised Issue to Paid-up Capital.	7 Ratio of Actual Circulation to Paid-up Capital.
		£	£	Per cnt.	No.	£	Per cnt.	Per cnt.
28	Chesterfield and N. Derby	10,421	9,868	94	1	35,000	30	28
29	Derby and Derbyshire........	20,093	19,351	96	3	62,500	32	31
30	BURTON AND UTTOXETER	60,701	46,257	76	3	130,000	47	36
31	Nottingham and Notts........	29,477	25,603	87	8	203,500	14	12
32	Moore and Robinson's, *Ltd.*	35,813	30,587	85	1	127,000	28	24
33	Lincoln and Lindsey	51,620	49,778	96	12	87,500	59	57
34	STAMFORD, SPALDING, &c.	55,721	49,897	89	19	200,000	28	25
35	Pares's Leicestershire	59,300	54,043	91	6	310,000	19	17
36	LEICESTERSHIRE BKG. Co.	86,060	65,786	77	11	275,000	31	24
37	Coventry Union	16,251	15,034	92	2	56,000	29	27
38	Coventry and Warwicksh.	28,734	16,581	57	1	105,000	27	16
39	Leamington Priors and Warwickshire Bank	13,875	11,417	82	4	32,000	43	36
40	Northamptonshire Bk. Co.	26,401	18,629	71	4	78,000	34	24
41	Northamptonshire Un. Bk.	84,356	58,172	70	4	132,500	63	44
42	COUNTY OF STAFFORD	9,418	9,047	96	1	60,000	16	15
43	WOLVERHAMPTON AND STAFFORDSHIRE	35,378	18,333	52	1	100,000	35	18
44	STOURBRIDGE AND KIDDERMINSTER BANK	56,830	48,303	85	14	100,000	56	48
45	Whitchurch and Ellesmere	7,475	4,371	58	2	not stated	not known	not known
46	Ludlow and Tenbury Bank	10,215	8,769	86	1	„	„	„
47	WORCESTER CITY AND COUNTY BANK, *Limited*	6,848	1,191	17	14	250,000	3	0½
48	W. OF ENG. AND S. WALES	83,535	81,256	97	43	750,000	11	11
49	Helston Banking Company	1,503	1,494	99	2	not stated	not known	not known
50	Stuckey's Banking Co.........	356,976	311,641	87	34	301,900	118	103
51	County of Gloucester Bank	144,352	91,615	63	12	181,000	80	51
52	Gloucestersh. Banking Co.	155,920	144,145	92	27	450,000	34	32
53	North Wilts Banking Co....	63,939	37,982	59	16	85,000	75	45
54	WILTS AND DORSET............	76,162	73,356	96	50	250,000	30	29
		2,652,993	2,318,646	87	489	8,816,901	For 50 Banks, 30	For 50 Banks, 26

TABLE LXXIII.—*Scotch Joint Stock Banks. Relation of Authorised Credit Issues and Actual Circulation to Paid-up Capital*, 1874.

[Cols. 2 and 3 are compiled from Mr. Palgrave's Tables.]

			1	2	3	4	5	6	7
Number.	Name.	Establishment.	Authorised Credit Issue.	Average Circulation in 1874.	Proportion of Circulation of 1874 to Authorised Issue.	Number of Offices.	Paid-up Capital.	Ratio per Cent. of Authorised Issue to Paid-up Capital.	Ratio per Cent. of Actual Issue of 1874 to Paid-up Capital.
			£	£			£		
1	Bank of Scotland	1695	343,418	667,000	194	77	1,000,000	34	67
2	Royal B. of Scot.	1727	216,451	719,000	332	107	2,000,000	11	36
3	British Linen Co.....	'46	438,024	530,000	121	68	1,000,000	44	53
4	Commercial B. of S.	1810	374,880	774,000	207	101	1,000,000	37	77
5	National B. of S.	'25	297,024	587,000	198	92	1,000,000	30	59
6	Aberdeen Tn. and C.	1825	70,133	199,000	428	41	252,000	28	79
7	Union B. of S.	'30	454,346	789,000	174	117	1,000,000	45	79
8	North of Scotland....	'36	154,319	322,000	209	47	320,000	48	101
9	Clydesdale	'38	274,321	536,000	195	80	1,000,000	27	54
10	Caledonian................	'38	53,434	104,000	195	22	150,000	36	69
11	City of Glasgow	'39	72,921	673,000	925	123	1,000,000	7	67
			2,749,271	5,900,000	214	875	9,722,000	28	61

TABLE LXXIV.—*Irish Joint Stock Banks of Issue. Relation of Authorised Credit Issues and Actual Circulation to Paid-up Capital*, 1874.

[Cols. 2 and 3 are compiled from Mr. Palgrave's Tables.]

			1	2	3	4	5	6	7
Number.	Name.	Establishment.	Authorised Credit Issue,	Average Circulation in 1874.	Proportion of Circulation of 1874 to Authorised Issue.	Number of Offices.	Paid-up Capital.	Ratio per Cent. of Authorised Issue to Paid-up Capital.	Ratio per Cent. of Actual Issue of 1874 to Paid-up Capital.
			£	£			£		
1	Bank of Ireland	1783	3,738,428	2,879,000	77	50	2,769,230	135	104
2	Northern Bkg. Co.	1825	243,440	477,000	197	44	300,000	81	159
3	Provincial B. of I.	'25	927,667	885,000	95	44	540,000	172	164
4	Belfast Bkg. Co.	'27	281,611	476,000	169	36	250,000	112	190
5	National Bank	'35	852,269	1,366,000	160	106	1,500,000	56	91
6	Ulster Bkg. Co.	'36	311,079	686,000	221	44	250,000	124	274
			6,354,494	6,769,000	107	324	5,609,230	113	211

From these tables are drawn the following results:—

Nationality.	Ratio per Cent. of Actual Average Issue of 1874 to Authorised Issue.	Ratio per Cent. of Authorised Issue to Paid-up Capital.			Ratio per Cent. of Actual Average Issue of 1874 to Paid-up Capital.			Average Authorised Circulation per Bank of Issue.	Average Actual Average Circulation of 1874 per Bank of Issue.	Average Actual Circulation of 1874 per Office of Banks of Issue.
		Lowest.	Highest.	Average.	Lowest.	Highest.	Average.			
	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	£	£	£
English	87	3	118	30*	0½	103	26*	49,129	42,938	4,742
Scotch ..	214	7	48	28	36	101	61	249,934	536,304	6,743
Irish	107	56	172	113	91	274	121	1,059,082	1,128,167	20,896

* For 50 of the 54 banks.

The above figures show how greatly in Scotland, and still more in Ireland, the proportion of actual circulation to paid-up capital exceeds the like proportion in England. It will be seen that in Ireland, with one exception, the actual circulation of every bank is in excess of its paid-up capital.

Taking the average actual circulation of banks in Ireland at 100, the average circulation in Scotland is 48, and in England 4 per bank.

Table LXXV.—*English Joint Stock Banks of Issue, Classified according to Amount of Paid-up Capital.*

Capital.	Number of Banks.	Total Paid-up Capital.	Authorised Issue.	Actual Average Circulation, 1874.
		£	£	£
Not stated	4	—	47,252	41,314
„ above 50,000*l.*	5	178,255	78,000	69,410
Above 50,000*l.* and not above 100,000*l.*	15	1,204,682	482,636	410,751
„ 100,000*l.* „ 200,000*l.*	14	2,139,904	738,012	611,120
„ 200,000*l.* „ 300,000*l.*	9	2,271,660	500,765	451,131
„ 300,000*l.* „ 500,000*l.*	6	2,272,400	722,793	653,664
„ 500,000*l.*	1	750,000	83,535	81,256
Totals	54	8,816,901	2,652,993	2,318,646

A bank with a paid-up capital of only 100,000*l.* must be regarded as quite a small joint stock bank, yet we find that 44½ per cent. in number and 22½ per cent. in amount of the joint stock issues in England emanate from banks whose paid-up capital does not exceed 100,000*l.*

Possible Legislation.

Such being the conditions under which the non-legal-tender circulation is conducted, and such its present position in the three kingdoms, it may now be considered what policy it would be practicable and at the same time judicious to adopt with regard to it.

The various lines of policy advocated seem to be as follows:—

1. To abolish all non-legal-tender issues and to confine the note circulation to the State or the Bank of England, or to the Bank of England for England, and similar State banks for Scotland and Ireland.
2. To reform the present system.
3. To reform and extend the present system.

Abolition of Non-Legal-Tender Issues.

This course would realise the ideas of Sir Robert Peel, who in introducing the Act which bears his name, avowed his intention of paving the way for the gradual absorption of all private issues. Sir Robert Peel had a prejudice, natural perhaps, but certainly mistaken, against private issues. He attributed to them a power for evil which they do not possess. He stated that being over-issued they became depreciated and produced speculation, inflation of prices, and consequently crisis. In fact he erroneously ascribed to a convertible note circulation the vices of an inconvertible note circulation, and to an over-issue of notes the calamities which really arose from the reckless advances and consequent losses made by bankers. In support of his arguments he gave the following table:—

TABLE LXXVI.—*Bankruptcies of Private Bankers in the Years* 1839-43.

	1839	1840	1841	1842	1843	Total.
Number of Bankruptcies	9	24	26	12	11	82
Of which were Banks of Issue	–	8	11	4	6	29

It would thus appear that out of eighty-two bankers who failed in the years 1839-43, only twenty-nine or 35 per cent. were issuing bankers. It seems certainly a stretch of imagination to ascribe these banking disasters to over-issues of notes when so preponderating a proportion of their number were failures of bankers who did not issue notes.

From a statement in the "Bankers' Magazine" of 1847, page 364, it would, however, seem that Sir Robert Peel's figures included a large number of fiats issued against joint stock bank proprietors, who were then styled bankers. The statement is as follows:—

Bankruptcies of Bankers, 1839-43.

Private banks of issue	27
,, non-issue	8
Banks bankrupt	35
Duplicates of private bank fiats	2
Fiats issued against joint stock bank shareholders	34
	71

In fairness, it must be admitted that Sir Robert Peel's views have this plea for their partial justification, that at the period over which his experience extended, the desire to get their notes into circulation may have acted as a temptation to some bankers to make imprudent advances; but it is necessary to observe that there has been a remarkable alteration in the relative use of the various instruments of the banking trade since those days. The advances made by a bank of issue to its customers may and do increase largely without its note circulation being augmented by 5*l*. In fact the part played by notes in the settlement of transactions is much more insignificant than it was five-and-thirty years ago. An overwhelming majority of the transactions of a bank are now made by cheque and by advice, without the intervention of coin or notes. Mr. Palgrave in his evidence before the Committee on Banks of Issue, submitted the following statement from a bank in Manchester: "In 1859 the cash payments, coin, and notes were about "53 per cent. of the total turn over of the bank; in 1864 they "were about 42 per cent. of the total turn over; in 1872 they were "almost 32 per cent. In 1864 the coin was about 8 to 10 per cent., "and the notes 92 to 90 per cent. of the total payments in cash; "in 1872 the coin was about 15 per cent. and the notes 85 per cent. "of the total payments in cash." Mr. Palgrave added, "The "progressive decline in the use of notes thus indicated is remark"able." The fact is that the development of the system of cheques, and the admirable machinery of the clearing-house, have relegated the note circulation now more than ever to the position of being merely the small change of commerce. Even in Scotland and Ireland, where issues are practically unlimited, the note circulation bears the insignificant ratios of $6\frac{1}{5}$ and 15 per cent. respectively to the total resources wielded by the banks. Therefore, to speak now of our convertible note issues exercising any influence whatever on prices is a glaring absurdity. High prices are sometimes a cause, but never an effect of an increased circulation of convertible notes.

Again, so long as notes are paid in gold on demand they cannot be either over-issued or depreciated. The public take and keep out only such notes as they require for their minor payments and no more; and a note for which five sovereigns can be had in the next market town can never be said to be depreciated.

Banking is now in abler and stronger hands than it was five-and-thirty years ago, and thus the probability of abuse of country issues is much diminished, even if its possibility could be admitted still to exist.

It is, however, argued that note issue is in reality a function of the State as much as coinage, and should not be delegated to a multiplicity of private hands. This, however, is both theoretically and practically incorrect. Legal tender issue is certainly the proper function of the State, and if delegated should be delegated to only one State bank, or at most to one for each division of the United Kingdom, but it is not so with non-legal-tender issues. These are a form of credit which theoretically every one has a right to use; and practically that right should neither be restricted nor withdrawn, unless it be clearly proved that restriction or withdrawal is necessary in the interests of the community at large. The question is thus narrowed into one of expediency. Experience has demonstrated the expediency if not the necessity of restriction; but the expediency of withdrawal has not been, and as I shall venture to contend, cannot be proved.

Before considering what advantage would be derived from confining the note issues to a State bank, it should be observed that the security and convertibility of the Bank of England note are absolutely assured, for the State having decreed it to be legal tender is bound to provide for its payment if the State bank should fail to do so; and the Act of 1844 ensures convertibility, except in the unlikely event of the public ceasing to hold so much as 15,000,000*l*. of the bank's notes. No one can doubt the advantage of having an absolutely secure and convertible legal-tender note issue, and although Scotland and Ireland seem to get on well enough without any legal-tender note, yet if we had to choose in England between a system of one issue only, and that a legal-tender issue, and a system of plurality of issues, none of which were legal tender, our suffrages would, I think, be pretty unanimous in favour of legal tender and a single issue. But no such alternative is before us. No one proposes to abolish the legal tender issue of the State or the State bank. The alternative we have to consider is between a single issue which shall be legal tender, and a single legal tender issue supplemented by a plurality of non-legal-tender issues.

What, then, would be gained by the suppression of all non-legal-tender notes? This much certainly that there would no longer be in circulation in the country any note about the security and ultimate convertibility of which there could for one moment be any doubt whatever. That is an important advantage; but it is the sole advantage, and it may be too dearly purchased.

It may be imagined that the State would derive some considerable profit from the transference of the country issues to the Bank of England, and it may be well to estimate what this would amount to. The average circulation of the Bank of England for the year 1874 was 26,264,000*l.*, and the profit thereon paid to Her Majesty's exchequer, exclusive of 60,000*l.* composition for stamp duty, was 138,578*l.*, or a fraction over one-half per cent. per annum on the amount of circulation. But the Act provides, sec. 9, that the public are to have the net profits of any increase of authorised issue on securities allowed in respect of lapsed country issues. If the English country issues were suppressed, and the Bank were allowed under the Act to increase its issues on securities by two-thirds of the authorised issue of the country banks, the profit to the State might be calculated thus:—

		£
Amount of authorised country issue suppressed		6,461,000
Two-thirds thereof added to Bank of England authorised issue on securities		4,300,000
Interest on 4,300,000*l.* securities at 3 per cent.		129,000
Less Cost to Bank of notes and management at 12*s.* $7\frac{1}{4}$*d.* per cent.		27,100
		101,900
	£	
Less loss to State of Stamp Duty on 5,000,000*l.* at 7*s.* per cent.	17,500	
And loss of part of Licence Duty of 30*l.* per office, say	15,000	
		32,500
Net Profit to State		69,400

or barely $1\frac{2}{5}$ per cent. on the amount of circulation suppressed, even on the unlikely supposition that the Bank did not stipulate for a more favourable arrangement.

It will not surely be seriously argued that a paltry profit to the State of 69,000*l.* per annum would warrant the suppression of the country issues, unless that step were called for on well-established grounds of public policy. Moreover, justice forbids that the country issues should be deprived of their circulation without compensation.

The direct profit derived by the English country banks from their issues may fairly be set down at 3 per cent. upon the amount in circulation. The average English country circulation of 1874 was 4,980,000*l.* The profit thereon at 3 per cent. would be 149,400*l.*

but this sum by no means adequately represents the annual value of the circulation to the banks. The notes are not only a convenient and economical banking instrument, but they act as so many advertisements of the issuing bank; they feed deposits; and what is of still greater importance to the banks and the nation, when the authorised issue is not fully used they enable the bank to extend its branches to places where it would not otherwise pay to open a banking office. Therefore the actual value of their circulation to the English country issuers must be set down at very much more than 150,000*l.*

The following extract from Mr. Seebohm's thoughtful evidence before the Committee of 1875 will sufficiently illustrate this point. *Question:* "Will you explain the nature and value of local issues to "local issuing bankers?" *Answer:* "The value to the country "issuing banker of the issue is not at all, as is often supposed, its "being a monopoly; the country issuing bankers value their issue "far more than they would value a similar amount of deposits, "because by the abolition of the issue they would lose not only the "interest realised on the amount in actual circulation, after deducting "stamp duty, licences, and expenses, and also the interest saved on "the amount of unissued notes kept behind the counter ready for "issue, instead of coin or Bank of England notes; but they would "also (and this is really the chief disadvantage) lose that power of "accommodating their customers and others in small transactions "which, especially in the rural districts, is intimately interwoven "with their business, and conducive to its success. If it had merely "been a monopoly of a certain amount, then probably it would be "simply a question of compensation in case of its withdrawal, but "seeing that it does enter into their mode of doing business, and "that it is so interwoven with it that it enables them to give facilities "to their customers which they could not otherwise give, the feeling "of the country bankers is, that if any change were made, at all "events all these points ought to be thoroughly taken into account, "and that no substitute for local issues would really be satisfactory "either to them or their customers, unless it afforded the same kind "of facilities as were now afforded by their local notes, and not only "as regards the larger transactions of trade, and the larger centres "of trade, but especially as regards the small transactions of business in the agricultural and rural districts."

It is thus abundantly evident that any adequate pecuniary compensation to the issuers for the suppression of their circulation must entail a considerable permanent loss to the State.

It has, however, been hinted that to prevent injustice and to avoid pecuniary compensation, Parliament might fix a future date at which the right of private issue should cease and determine. If the privilege of private issue be worth ten, fifteen, or twenty years' purchase, Parliament might decree its prospective abolition at the close of such of these periods as might be determined upon. Just so. If land be worth thirty years' purchase, Parliament might decree that at the end of that time all the land in the United Kingdom should become the property of the State. But this would be confiscation. Yes, and the abolition of the private issues ten, fifteen, or twenty years hence without adequate compensation would likewise be confiscation. That Government would be bold indeed which should make any such proposal to Parliament.

What harm have the English country issues done, what harm are they likely to do that they should be suppressed? In thirty-one years only 12 per cent. of their number, and barely 7 per cent. of their amount as fixed in 1844, have lapsed by failure, whilst 60 per cent. of their number, and 75 per cent. of their amount as fixed in 1844, still remain to attest their stability and acceptability in spite of all the legislative provisions then designed to promote their forfeiture. Such remarkable stability and acceptability would surely seem to indicate that they are an institution worthy of retention. The utmost harm that can happen from their retention is that now and then a bank may fail, and the note holders may suffer loss. The note holder is generally an involuntary creditor, and as such seems quite entitled to some legislative protection; but this could readily be obtained for him without a measure so sweeping and unjust as the abolition of a system which can be shown to possess practical merits far outweighing this its only real defect.

These merits are:—

1. Ready convertibility.
2. Freedom from forgery.
3. Cheapening banking to the public.
4. Extending the benefits of banking over the country.
5. Relieving the Bank of England reserve of a periodical strain.

1. *Ready convertibility.*—Bank of England notes are payable only at the head office in London and at the place of issue from which they are dated. Thus although it circulates and is legal tender all over England and Wales, a Bank of England note issued at one branch of the bank is not only not payable, but is actually and systematically refused payment in gold at any other branch of the bank. It thus lacks the prime requisite of ready convertibility within the area of its circulation; and this defect cannot possibly be rectified except by the combination of two impracticable conditions: 1st. That the number of the country offices of the Bank, now only nine, be very largely increased; and, 2nd. That the notes issued at one office be payable in gold at every other office. The

non-legal-tender issues on the other hand do not circulate beyond the area occupied by the issuing bank's branches, and at these branches, though they may not be by law payable, they are never refused payment in gold. It must at the same time be admitted that change can be obtained at a railway station, a hotel, or a shop, for a Bank of England note more readily than for a local note which has strayed beyond the area of its circulation.

2. *Freedom from forgery.*—Mr. Seebohm made the following statements on this point to the Committee of 1875. "The freedom "of the local note from the risk of forgery is readily explained by "the fact that its genuineness can at once be determined by pre-"senting it at the issuing bank," or, it may be added, at one of its branches. "The forged notes would have to be circulated in the "very district where they would be most easily detected. Many "days could hardly pass before a forged note would find its way to "the local bank, and the public would be made aware that a forgery "had been committed; but with a single issue that does not apply, "because the forged note would probably be circulated in an outlying "part most distant from the office where the forgery would be readily "detected. That is well known by the public, and the constant "practice of the public in the agricultural districts is that, whilst "they will take a local note without much scrutiny, and without "taking its number, they will always take the number of a Bank of "England note, and frequently write the name of the last holder "upon the back of it."

3. *Cheapening banking to the public.*—The possession of the power of issue enables a banker to do business on cheaper terms for the public. He can cash in his own notes free of commission cheques upon other towns, whilst on these a non-issuing banker must make a charge for collection. Sums paid to credit with a banker in his own notes are cash to him and to his customer the moment they are received. Sums similarly paid in Bank of England notes are not equivalent to cash if the till be already full. The banker must forward them to London or elsewhere before they can be cashed. Directly or indirectly the customer has to pay for the delay, the expense and the risk thus involved, whereas he would have nothing at all to pay in these respects if local notes were used. There is great economy of capital in local issues. They enable a bank to hold a considerable proportion of its till money in its own notes, instead of at a loss of interest in legal tender notes, and the customers of the bank reap the benefit in more moderate charges. The boasted cheapness of Scotch banking to the public is due in a very great measure to the Scotch system of issues.

Whilst then it might be possible at some cost to the taxpayer to compensate the English issuing bankers for the loss of their circulation, it would be quite impossible to compensate the public for the loss of the facilities which they derive from that circulation. In connection with this point I may cite the valuable testimony given before the Committee on Banks of Issue, by Mr. W. Bagehot, of Stuckey's Banking Company, the largest bank of issue in England. The chairman put to him the following question:—"If "I understand you rightly, you make advances or you give "facilities upon easier terms to very small people than you would "do if you had not the right of issue, and if you had not that right "of issue it would be a losing concern to you to give those "facilities. If you had received ten times the value of your issue, "once for all, I presume that you would still after a time desire to "conduct your business in what would be the most profitable way "to you, and that it would be impossible for Parliament to say you "ought to have done this or that with regard to this or that particular cow-keeper or withy-binder?" Mr. Bagehot's reply was, "Of course it would be difficult, and, therefore, I think it is for "the consideration of Parliament whether by abolishing the country "issues it would be advisable to injure the public in this way."

4. *The power of private issue promotes the extension of the benefits of banking over the country.*—It enables a bank to plant branches in places where, if the till money had all to be held at a loss of interest, branches would not pay. How important a part the extension of banking over the length and breadth of the country plays in the development, economisation, and utilisation of the national resources, requires no demonstration. The great development of the branch system in Scotland would have been impossible but for the power of issue. Mr. Seebohm stated in evidence before the Committee on Banks of Issue, that "the large bank in Somersetshire (Stuckey's "Bank) would have to withdraw a considerable numberof branches "if they had not their issue."

5. The *periodic expansions* to which the English non-legal-tender note circulation is subject, *take place without affecting the reserve of the Bank of England*, and consequently without disturbing the rate of interest. Mr. Palgrave's tables show that on the average of the last ten years the English provincial circulation has expanded in obedience to the requirements of the public between August and October to the extent of 547,400*l*. per annum.

This normal expansion subsides only gradually, and if it had to be provided for from the reserve of the Bank of England, in addition to the November expansions of the Scotch and Irish circulations, the disturbance to the reserve of the Bank and to the rate of interest would necessarily be intensified at the very time when experience has shown the reserve is most liable to reduction and the London money market most keenly sensitive.

It can scarcely be seriously proposed to abolish the non-legal-tender circulation of Scotland. The banking system of that country has grown up with the aid of note issues. It would be utterly disorganised if these were withdrawn. The banks would suffer by the enforced suppression of a very large number of their smaller branches. The public would suffer by the withdrawal of many of their accustomed facilities, and by the increase of banking charges which must needs follow on the loss of the profit now derived by the banks from their circulation. The country is wedded to its system of note circulation, and would not listen for one moment to any proposal for its abolition.

Finally, the cost to the State for compensation would be very great. The direct value of their circulation to the Scotch banks may be estimated by calculating what the banks would lose if deprived of their issues.

		£
1. They would lose the profit on their notes in the hands of the public, amounting to		5,900,000
2. They would require to hold in legal tender as till money and reserves, say 6 per cent. of their liabilities, which, deducting circulation, are 86,500,000*l.*	5,190,000	
They at present hold gold and silver	4,100,000	
Additional legal tender to be held at a loss of interest		1,090,000
		6,990,000
Loss on that sum at 4 per cent.		279,600
Less present cost of circulation, at 1¼ per cent.		73,750
Estimated net direct annual value of Scotch circulation to the Scotch banks		205,850

or exactly 3½ per cent. on the amount of notes in circulation.

The case of the Irish circulation is, I take it, pretty much the same as that of the Scotch, save that, though larger in amount, it is not quite so valuable to the issuers, in consequence of the larger proportion of coin held. But for their note circulation the Scotch banks would require to hold about a million more coin than they now do. The case seems to be reversed in Ireland. But for their note circulation, the Irish banks of issue would probably require to hold some 700,000*l.* less coin than they now do. The calculation stands as under:—

	£
Coin held by Irish banks of issue	2,800,000
Without issues their liabilities would be reduced to 35,700,000*l.*, and if they held legal tender reserves and till money to extent of 6 per cent. of that amount, they would hold	2,142,000
Coin calculated as now held specially in respect of circulation	658,000
The Irish circulation amounts to	6,800,000
Deduct coin reckoned as held specially against it	658,000
	6,222,000
4 per cent. on this amount	248,880
Deduct present cost of circulation, at say 1¼	85,000
Estimated net direct value per annum of their circulation to the Irish banks of issue	163,880

or 2⅖ per cent. upon the average amount of notes in circulation.

Why the English non-legal-tender circulation should be suppressed if the Scotch and Irish issues are to be allowed to remain, it is very difficult to comprehend.

If the whole of the non-legal tender issues of England, Scotland, and Ireland, amounting to 17,700,000*l.*, were suppressed, the profit to the State would be at best, at 1⅜ per cent., 243,000*l.* per annum, which would be totally inadequate to compensate the issuing banks for a loss of direct annual profit amounting to, for

	£
England	150,000
Scotland	206,000
Ireland	164,000
Total	520,000

besides the loss of great indirect advantages, the money value of which cannot be appraised.

Retention and Proposed Reform of Non-Legal-Tender Issues.

The great practical advantages of the English non-legal-tender issues have been shown. It has also been proved that the important functions which they so well perform cannot by any possibility be fulfilled by the notes of a State bank.

The conclusion cannot then be resisted that the sound policy is to retain the English as well as the Scotch and Irish country issues. It is true that they all possess one defect. The security of the note depends solely on the solvency of the issuer. Banks may fail; banks do fail; and when they fail, their note holders may lose money; but this solitary defect admits of easy remedy.

Three courses suggest themselves:—

1st. To make the note a first charge on the issuer's estate in the event of failure.

2nd. To require Government securities to be lodged with the State to cover the amount of the maximum issue.

3rd. To combine the first two courses, *i.e.*, to make the note a first charge on the estate of the issuer, and to require security for the whole or part of the authorised maximum of circulation.

1. *To make the notes a first charge on the issuer's estate in the event of failure.* It has been objected to this suggestion, that in the event of a bank getting into difficulties depositors would run upon it in order to put themselves in the position of note holders. But it cannot be supposed that depositors who, under the present position of the issues, would not run upon the bank for legal tender, would, if the notes ranked preferentially to other liabilities, run upon the bank for payment in its notes. If a depositor doubted the solvency of the bank which held his money, he would demand payment of his deposit in legal tender, or if he took the bank's notes, it would be for the purpose not of holding them, but of paying them immediately to his credit with another banker, who would in due course present them for payment to the issuer.

To make the notes a first charge on the estate in the event of insolvency, would probably, in almost every case, protect noteholders from loss by the failure of the issuer, especially if every bank issuing notes were compelled to publish an audited and certified balance sheet at least once a-year, and to make for publication in the "Gazette" and in a local paper a return of the monthly average of the weekly amount of the coin and Bank of England notes in its tills and reserves.

2. *To require each issuer to lodge with the State English Government securities to cover the amount of his maximum issue.* If it be objected that this might secure the ultimate payment of the note, but would afford no guarantee of its immediate convertibility, it may be replied that the State is by no means called upon to see to the immediate convertibility of a non-legal-tender note, though it may be politic to organise measures for the protection of the holder from loss; but in any case notes secured by the deposit of consols with the State would be practically convertible so far as the public were concerned, for as the discredit of the Government-Security note of one issuer might affect the notes of other issuers in the same district, it would be the policy of these issuers to give credit for the notes of the failed bank—knowing their ultimate sufficiency—rather than allow the system of note issues in which they were themselves interested to suffer discredit. This is precisely the course which the Scotch banks, after a couple of days' hesitation,

adopted with regard to the notes of the Western Bank when it failed, and they obtained a permanent accession of business by so doing, avoiding of course a loss of interest by having the notes marked as presented for payment.

But it may be argued further that the bank may have issued more notes than the amount authorised, or that its failure may take place during a panic, when consols are at 85, or during a war when they have fallen to 70, and those who held or took up the notes might ultimately lose a portion of their money. These points might be met by imposing a criminal penalty on issuing beyond the limit authorised, and by requiring that a margin of security should be established and maintained.

It is necessary to reckon whether the privilege of issue would be worth having if security had to be furnished for it in this manner.

The cost to the issuer of furnishing security for the maximum amount of his circulation may be estimated as follows:—

Let us assume the average amount of circulation to be represented by 100*l.* Let us allow 20 per cent. for fluctuations above the average, although Mr. Palgrave's tables show that during the five years 1870-74 the highest monthly excess over the year's average was 8 per cent. in England, 16 per cent. in Scotland, and and 12 per cent. in Ireland. The authorised limit of circulation, would then be represented by 120*l.* Security in consols would have to be provided for that sum, with a margin of 10 per cent., that is, for 132*l.* Assuming consols to yield $3\frac{1}{4}$ per cent., and the ordinary rate of interest obtainable by a bank on the average of its advances and investments to be 4 per cent., there would be a loss on the special investment of 132*l.* in consols of 0·99*l.* Then the State would have to make a charge for its trouble. From the paper put in by Mr. K. D. Hodgson, one of the directors of the Bank of England, in the course of his evidence before the Committee of 1875, it is calculated that the profit to the State on the Bank of England circulation, exclusive of stamp duty, is equal to 10*s.* 6*d.* per cent. on the average amount of the notes in the hands of the public. A Government duty of one-quarter per cent. on the amount of authorised non-legal-tender issues should amply suffice for the remuneration of the State, but let us assume a duty of one-half per cent., which would amount to 0·6*l.* in our calculation. It thus appears that the loss to the issuers by giving security may be estimated at 0·99 + 0·6 = 1·59, or in round numbers 1*l.* 12*s.* per cent.

For clearness the calculation is repeated:—

	£
Average actual circulation	100
Authorised limit—20 per cent. for fluctuations	120
Security consols with margin of 10 per cent.	132
Loss of ¾ per cent. on investment in consols	0·99
Government duty ½ per cent. on authorised limit	0·60
Cost per cent. on average circulation of providing security	1·59

If the direct money value of the circulation in England, Scotland, and Ireland, has been correctly estimated, the result of giving security for it would be as follows in each division of the United Kingdom:—

Locality.	Present Direct Value.	Loss by giving Security.	Leaving net Direct Value.
	Per cnt. £ s.	Per cnt. £ s.	Per cnt. £ s.
England	3 –	1 12	1 8
Scotland	3 10	1 12	1 18
Ireland	2 8	1 12	– 16

Or 5*s.* per cent. more in each case if Government were satisfied with a duty of one-quarter instead of one-half per cent.

The effect which the possession of a perfectly secured issue would have on the amount of legal tender held by the issuers has not been taken into calculation. It would in most cases tend to diminish the amount of legal tender necessary to be held *in respect of issues*, and to that extent it would improve the net value of the circulation. Be that as it may, if the above calculation be approximately correct, it would certainly be worth while for the issuers to sacrifice even 1½ or 1¾ per cent. from the profit on their issues, in order to be enabled to retain them with all their concomitant advantages. The National Provincial Bank of England, before giving up their issues in consequence of opening a banking office in London, offered to deposit consols in security, and also to pay a tax of 1*l.* 5*s.* per cent. for the right of issue. Public policy does not require that the non-legal-tender issues should be abolished, but it does seem to require that they should be secured, and the cost of providing security must be borne by the issuers.

3. *To make the notes a first charge on the estate of the issuer, and to require security for the whole or part of the authorised maximum of circulation.* If the notes were made a first charge on the estate, it would probably be sufficient to require the provision of Government security for one-half of the maximum or authorised circulation.

The cost of this scheme to the issuer may be calculated as follows :—

	£
Actual circulation	100
Authorised maximum	120
Consols to be provided for	60
Loss on consols at $\frac{3}{4}$ per cent.	0·45
Government duty 10*s*. per cent. on 120*l*.	0·60
Cost per cent. to issuer	1·05

The result to the issuers would be to leave the net direct value as under :—

	£	*s.*		£	*s.*		£	*s.*
In England	3	–	–	1	1	=	1	19
,, Scotland	3	10	–	1	1	=	2	9
,, Ireland	2	8	–	1	1	=	1	7

or 5*s*. per cent. more in each case if Government were satisfied with a duty of one-quarter instead of one-half per cent. Probably if one half per cent. were charged, some relief might be got from the licence duty of 30*l*. per office at which notes or drafts under composition for stamp duty are issued ; an impost which now exercises rather a repressing effect on the extension of branches.

It seems to me that the third course is the one which legislation should take.

It would probably be quite unnecessary to bind the banks to hold coin or other legal tender. A bank failing to pay its notes on demand would forfeit the privilege of issue. This of itself ought to insure the maintenance of an adequate supply of legal tender ; but a monthly return should be required, for publication, of the average weekly amount of legal tender held, and every bank should be obliged to publish a balance-sheet annually in a prescribed form.

In providing for the maintenance and security of the English country issues, every facility should be given for their consolidation by the withdrawal of all restrictions upon the number of partners in private banks, and of all provisions directed against the amalgamation of issues. The exclusion of English joint stock banks of issue from banking in London should also be abolished.

Proposed Extension of Non-Legal-Tender Issues.

If the non-legal-tender issues were thus secured and reformed, justice as well as the interest of the public requires that they should no longer remain the exclusive privilege of the existing banks of issue, but that alike in England, Scotland, and Ireland, any well established bank should be allowed to participate in the privilege.

The forty-three purely provincial English joint stock banks of non-issue have a paid-up capital of 10,545,000*l.*, and the London and provincial banks have a paid-up capital of 4,425,000*l.*, making a total paid-up capital of 15,000,000*l.*

There are eighty-three purely provincial private banks of non-issue in England and Wales, and the privilege of issue could not be withheld from these if they came under the prescribed conditions.

It would, however, be most expedient to avoid a multiplicity of small issuers, and this might be effected by providing, 1, that no new right of issue should be granted for a less sum than 50,000*l.*, and 2, that all issues actually under 10,000*l.* on the average of, say the year 1885, and all under 25,000*l.* on the average of, say the year 1890, should be forfeited. The latter provision, coupled with the removal of all restrictions on amalgamation, would speedily lead to a very desirable consolidation of the smaller issuers without inflicting on them any loss or injustice.

Should it be urged as an objection to the extension of the country issues, that the pressure on the Bank of England during a time of crisis or threatened crisis, already too great, would be intensified, as the provincial banks would have not only their deposits but likewise their circulation to protect, and would require to hold for that purpose an increased amount of legal tender, it may be replied that the notes would command confidence by bearing on the face of them the conditions as to security under which they were issued. Moreover, it is to be hoped that the days of the reliance of our banking system on the single attenuated reserve of the Bank of England are already numbered, and that the regular publication of the amount of legal tender held by each bank will be enforced to secure the permanent maintenance by every considerable bank of a tangible reserve in coin or legal tender notes. The extension of the country issues would facilitate the formation of such reserves by throwing free a considerable amount of the legal tender now in circulation.

The fact is that we have in the country a very ample amount of coin and legal tender notes. Mr. Palgrave, in the course of his very interesting and instructive evidence before the Committee of 1875, gave the following statement of the estimated actual gold circulation in England :—

[000,000's omitted.]		£
Amount of gold coin in Great Britain and Ireland, as per estimate of Mr. Hendriks		100,
Add gold bullion in Bank of England		15,
,, Bank of England active circulation		26,
,, country note circulation		5,
		146,
Deduct—	£	
In Bank of England, gold coin and bullion	24,	
,, other English banks, gold coin	16,	
,, Scotland, gold coin in banks and circulation	5,	
,, Ireland, ,,	7,	
		52,
Total circulating medium in hands of public in England, including Bank of England notes held by other banks		94,
Deduct Bank of England notes	26,	
Less ,, abroad	3,	
	23,	
Country notes	5,	
		28,
Estimated gold coin in hands of public in England		66,

Assuming roughly that of the 23,000,000*l.* of Bank of England active circulation estimated to be in this country, 13,000,000*l.* are in the hands of the banks and 10,000,000*l.* in the hands of the public, we should have a total legal tender circulation in the hands of the public of 76,000,000*l.*

Now if this estimate be at all an approximation to the facts, we would appear to be unduly lavish in our currency arrangements in one direction, and unduly economical in another. We have some 76,000,000*l.* of gold and legal tender notes sunk in the hands of the public in England, and only 10,000,000*l.* or 12,000,000*l.* free as a reserve against the gigantic banking liabilities of the entire United Kingdom.

The legal tender in the hands of the banks cannot be reckoned as a reserve. It is simply till money—an implement necessary to the daily operations at the counter; and instead of being available as a reserve to fall back upon in a time of crisis, the stock of it then requires augmentation.

Neither can the gold and legal tender notes in the hands of the public, as distinguished from the banks, be regarded in the light of a reserve. It is true that they have been so regarded by authorities whose opinion is entitled to the greatest respect. It seems to be clear, however, that legal tender notes and gold in the hands of the public are merely instruments for effecting some of the cash payments of the country. The public will not keep in its hands systematically a larger quantity of these instruments than it requires, and it is very questionable if the quantity can be rapidly or appreciably diminished even by the advance of the rate of interest to a high point. Mr. Sampson Lloyd, in questioning Mr. Jervoise Smith in the Committee of 1875, brought out this point very distinctly—*Question:* "I presume the primary mode in which the Bank of "England would meet a foreign drain of gold would probably be by "attracting it from abroad?" *Answer:* "Yes, by raising the rate." *Question:* "And the only way in which it would diminish the "circulation of sovereigns would be by the exercise of pressure to "cause such a cessation of the transactions, or such a lowering of "prices as that gold ceases to be employed in the country, and so "filters gradually into the Bank?" *Answer:* "Yes." The operation of this process must needs be very slow—so slow in fact that the gold which it brings in will reach the central reserve only after the emergency is over, and when it is no longer wanted. The mass of legal tender circulation cannot thus be looked upon as a fund to be drawn upon in order to mitigate a crisis, or to replenish bullion reserves depleted by a foreign drain. It is quite true that in the event of war much of the gold in the country could be made available for export by the substitution of notes, and especially 1*l.* notes, but until liberated by such an expedient, gold in circulation cannot be held to answer the purposes of a reserve.

Therefore it would appear that in a great measure we have our legal tender in the wrong place. If we could take even 20,000,000*l.* of it out of circulation and place it in reserve, we should be in a much stronger position. The banking liabilities resting ultimately on the Bank of England reserve have been estimated in the foregoing pages to amount to 635,000,000*l.*, and assuming the Bank of England reserve to be 11,000,000*l.*, the ultimate bullion reserve is only $1\frac{3}{4}$ of the liabilities. If, however, we could, by the issue of well secured country notes, add 20,000,000*l.* to the reserve, we should attain much greater strength. We should have banking liabilities of 655,000,000*l.*, and legal tender reserves of 31,000,000*l.*, or nearly $4\frac{3}{4}$ per cent. of our banking liabilities, irrespective of the till money now held by the banks.

It would, however, be impossible to transfer even 20,000,000*l.* of legal tender from circulation to reserve without the issue of 1*l.* notes; and the feeling in England seems to run very strongly against the reintroduction of small notes; but an addition of 10,000,000*l.* or 11,000,000*l.* to the legal tender reserves by means of well secured country notes of 5*l.* and upwards might be quite practicable, and the coin in the Scotch and Irish banks, 7,000,000*l.*, being no longer tied up against circulation, would, to extent of at least 5,000,000*l.*, become available as a bullion reserve.

Supposing, however, a transference of legal tender from circulation to reserve effected to a certain extent, what guarantee should we have that the legal tender would be retained in reserve? Would not the Bank of England notes find their way to the Bank, and would not the gold tend to disappear by export? The publication of the stock of legal tender held by each bank would, I think, effectually prevent this. Public attention and public criticism would be directed to the amount held, and a wholesome regard for public opinion would constrain each bank to maintain a legal tender reserve adequate to its liabilities.

It will thus be seen that the suggestion which has been made for securing and extending the non-legal-tender issues would not diminish the circulation of the Bank of England. It would displace some of their notes in the hands of the public and transfer them to the hands of the banks, there to remain as a legal tender reserve against general liabilities; but so far as the Bank of England was concerned the notes would still be in the circle.

One important effect of the proposed arrangement would be to enable the circulation in Scotland and Ireland to pass through its normal periodic expansions without any strain on the Bank of England reserve, which as matters now stand is generally drawn upon in May by the Scotch banks to extent of three-quarters of a million, and in October and November by the Irish and Scotch banks together to extent of not less than a million and a half.

Another effect would be to remove inequalities of privilege as between bank and bank, by giving to each the amount of circulation which it could use.

At present, in England, many of the issuing banks could readily double or treble their circulation if they were not prevented by law from exceeding their fixed limits. Others, again, have not now an outlet for more than a fractional part of their authorised issues.

In Scotland, where all exceed their fixed or credit issues, there are wide and unjust differences of privilege. The British Linen Company and the City of Glasgow Bank are banks of about the same magnitude. The one has a credit circulation of 438,024*l.*, the other has only 72,921*l.*, and the bank which has the smaller credit circulation has by 143,000*l.* the larger actual circulation.

The figures of the two banks are as under:—

[Cols. 6, 7, and 8 are taken from Mr. Palgrave's Tables.]
[000's omitted in Cols. 2, 3, 4, and 6.]

	1 When Established.	2 Paid-up Capital.	3 Reserve Fund.	4 Money Lodged.	5 Number of Branches.	6 Average Actual Circulation, 1874.	7 Authorised Issue.	8 Proportion of Actual to Authorised Issue. Authorised Issue=100.
		£	£	£		£	£	
British Linen Company....	1746	1,000,	390,	7,957,	67	530,	438,024	121
City of Glasgow Bank...	1839	1,000,	451,	8,489,	122	673,	72,921	925

Thus the law compels the City of Glasgow Bank to hold upwards of 600,000*l.* of coin, whilst the British Linen can fulfil the conditions of the Act with less than 100,000*l.* The sole reason for this discrepancy is, that the City of Glasgow Bank was a young and a small bank, whilst the British Linen Company was a century old when Sir Robert Peel applied his rigid rule to the Scotch banks.

In Ireland, the Bank of Ireland's actual circulation in 1874 was 77 per cent. of its authorised circulation, whilst the actual circulation of the Ulster Banking Company was 221 per cent. of its authorised circulation.

All this inelasticity would be put an end to by the scheme proposed.

That scheme would also put a stop to the monopoly of issue and banking in Scotland, by enabling new banks to acquire the same privileges as the old banks.

The non-legal-tender note circulation should not be international. It should retain its local character. The issues in England should be confined to English banks, in Scotland to Scotch banks, and in Ireland to Irish banks.

An entirely different scheme from those which have been already adverted to has been suggested, viz., that the coin now held by the Scotch and Irish banks in respect of their excess of credit issues, should be specially "earmarked" against the circulation; and that the English provincial issues should be put upon a similar footing.

This would, in effect, create in each bank of issue an issue department separate from the banking department. It would be somewhat difficult of adjustment. We have seen that the Irish authorised credit issues are very large compared with the Scotch. The Irish banks hold 576 per cent. more coin than covers their excess of issue, whilst the Scotch banks hold only 30 per cent. of coin beyond the amount of their excess of issue. Yet the coin in the Scotch banks is 70 per cent. of their average circulation, whilst the coin in the Irish banks is only 41 per cent. of their average circulation. Moreover, similar inequalities exist between bank and bank, both in Scotland and Ireland. In England too, though no excess of the fixed limit of issue is permitted, and though there is no statutory provision for coin being held, the inequalities are extreme, some banks, as has been stated, having habitually in circulation nearly the whole of their authorised issue, and others finding an outlet for only a small fraction of their authorised amount.

In order, therefore, to apply the scheme equitably, it would be requisite to cancel the present credit limits, and to provide that, say 50 per cent. of the actual circulation should be secured by coin specially hypothecated against it. If, in addition to such a provision, the circulation were made a first charge on the estate of the issuer, there is no doubt that the notes would be abundantly secured. But two grave objections present themselves.—1. It would be impossible, with a multiplicity of issuers, to keep any check over the amount of coin held. 2. A very large aggregate amount of coin would be specially locked up against circulation, which would be much more advantageously employed as a reserve against general banking liabilities. These two objections, but especially the latter, seem to me to render the scheme inadmissible.

The Intrusion of the Scotch Banks into England.

The question of the intrusion of the Scotch banks into England stands some chance of being thrown into the shade by the more momentous controversy which it has raised, as to what is to be done with the country issues.

It may at once be conceded that there might possibly be some gain to the English public from the admission of Scotch and Irish banks to English soil. There would be increased competition, followed possibly in some provincial districts by a slight reduction of the terms of business. Banking, it is true, is already free in England. Any man or body of men may establish a bank in England, and new banks are opened year by year; but if increased competition in banking be a public desideratum, it is possible that the competition of these new, small, and untried banks may not be so advantageous to the English public as the competition of the large, well-established banks of Scotland, with their ample resources, and sound traditions of management. On the other hand, in establishing a footing in England, the Scotch banks would be at the disadvantage of not possessing local influence and local prestige in anything like the same degree as the established banks with which they ventured to compete.

Except on the borders and in cities like London, Liverpool, and Manchester, where the population includes a large and influential Scotch element, their progress would probably be discouragingly slow, notwithstanding their character for solidity and prudence; but if it be legal for them to come, as to which some doubt exists, and if they elect to take their chance, the question to be faced is, why should the English public be deprived of the benefit of such competition as they would create?

Under existing circumstances the answer is two-fold: 1, because their competition would be unjust to the English banks; and 2, because their extension beyond Scotland would be prejudicial to the interests of the Scottish public, and especially of the Scottish note holders.

1. The condition of Scotch and English banking is widely different, and that difference results from the utterly diverse manner

in which the two systems have, *ab initio*, been dealt with by legislation. In Scotland, freedom from legislative restrictions has favoured the development of large and strong banks, with numerous branches. In England, a long course of legislative restrictions has kept banking, with some exceptions, in the hands of comparatively small banks, with a distinctly local character. Legislation has given the Scotch banks the lucrative privilege of unlimited issues. It has denied that privilege to the English banks. Legislation prevents English banks from competing on equal terms with Scotch banks on Scottish soil. It is therefore unjust that Scotch banks, with all these legislative advantages at their back, should be allowed to compete on English soil on equal terms with English banks which have no such advantages.

The monopoly of issue and banking which the Scotch banks now enjoy in their own country is in reality the most remarkable instance of protection which retains at this day the sanction of the British Legislature. The English non-issuing banks, including all the banks in London except the Bank of England, are not protected at all, and the English banks of issue enjoy a measure of protection which is trivial compared with that allotted to the Scotch banks. Is it, then, consistent with free trade principles to admit these highly protected institutions to competition with institutions which are totally unprotected? It cannot be supposed that the Legislature would sanction such a flagrant and unjust violation of the sacred principle of free trade, even if the prospective advantage of such a course to the English public were ten times as great as it can possibly be proved to be.

2. Justice to Scotland forbids the ramification of the Scotch banks beyond the confines of their privileges. The author of a pamphlet printed in Glasgow in 1875 for private circulation, points out with great force that Parliament having tied the people of Scotland to her banks, it is only fair that the banks should be tied to Scotland. "In other words," he says, "the ramification of "our banks beyond Scotland into fresh fields of business is not "fairly allowable, their depositors and note holders being not "equally free to find themselves new banks and new note issuers."

The Act of 1845 confided to the Scotch banks the solemn and important trust of providing a sound bank note currency for their own country. This great trust was confided to them as purely Scotch banks, and it may justly be held that they betray that trust, and forfeit their right to their exclusive privileges, when by entering on the field of English banking they cease to be purely Scotch banks. There is no doubt the features of Scotch banking have already undergone a very marked alteration since 1845. Table LXXVII gives the progress since that date :—

TABLE LXXVII.—*Progress of Scotch Banking*, 1845 *to* 1875.

[Compiled chiefly from the evidence of Mr. Davidson, of the Bank of Scotland, before the Committee of 1875.]

	Number of Banks.	Paid-up Capital.	Bank Offices.			Money Lodged.					Note Circulation.				
			Number.	Proportion to Number in 1845.	Number of Inhabitants to each Office.	Amount.	Proportions to Amount in 1845.	Amount per Head of Population.			Amount.	Proportions to Amount in 1845.	Amount per Head of Population.		
		£				£		£	*s.*	*d.*	£		£	*s.*	*d.*
1845	19	10,793,415	382	100	7,178	33,192,105	100	12	2	1	3,087,209	100	1	2	7
'55	17	11,456,055	480	126	6,204	43,270,612	130	14	10	7	4,104,582	133	1	7	7
'65	13	9,431,000	654	171	4,870	56,185,061	169	17	12	10	4,382,600	142	1	7	7
'75	11	9,785,888	884	231	3,954	78,405,261	239	22	8	8	5,904,586	191	1	13	10

From this table it is apparent that with an actual diminution of paid-up capital, the Scottish note circulation has been nearly doubled, and the deposits have been considerably more than doubled. Moreover, many of the Scotch banks, and especially those which are in London, have entered largely on the system of accepting bills, an entirely new feature in Scotch banking since 1845. The acceptances of the eight leading Scotch banks amounted in 1873 to 6,100,000*l.*, and in 1874 to 5,120,000*l.* Four of them have entered on the comparatively unlimited field of business south of the Tweed. Without impugning the soundness of any Scotch bank, Parliament is bound, as guardian of the interests of the noteholders of Scotland, to consider whether the conditions under which so grave and responsible a trust was confided to these banks, are not now so seriously affected by the altered policy of several of them, as to endanger the soundness of the time-honoured note circulation of Scotland, and to render legislative interference not only desirable but necessary.

On these distinct and weighty grounds of justice to English bankers, justice to the public of Scotland, and consistency with the principles of free trade, it is contended that if under existing legislation the Scotch banks are to retain their exclusive privileges in Scotland, they should be required to confine their banking operations to Scotland. This is the sound and intelligible principle of Mr. Göschen's Bill, which was held in abeyance, pending the report of the Committee of 1875.

The National Bank of Scotland and the Bank of Scotland have since 1864 and 1867 respectively had banking offices in London, and the Royal Bank in 1873 obtained an Act altering its constitution so as to enable it to open a banking office in London, which it did in 1875. Whether the National Bank of Scotland and the Bank of Scotland have been in London all these years contrary to law is open to discussion, but if not it would be a hardship on them to drive them away now without compensation.

If the English, Scotch, and Irish issues were suppressed in favour of the issues of the State or a State bank, which I have endeavoured to show would be a most impolitic step, all the banks would be placed upon an equality, and those of one division of the United Kingdom need no longer be debarred from extending into the other divisions.

Similarly if Parliament agreed to reform and extend the system of non-legal-tender issue in England, Scotland, and Ireland by admitting all banks on certain conditions to the privilege of issue, which I have ventured to advocate as the most politic step in the circumstances, banking in each division of the United Kingdom might fairly be thrown open to the banks of the other divisions. It is true that if 1*l.* notes continued to be prohibited in England the privileges of the English banks would not be on a par with those of Scotland and Ireland, but the Scotch privileges would have been docked of some of their profit, the Scotch monopoly would have ceased to exist, and the just objections now existing to the intrusion of Scotch banks on English soil would be in a great degree removed.

Note.—In Sections I to VI the author has in a great measure trodden in the track traced by Mr. Newmarch in 1851, and Mr. Palgrave in 1872. That he has carried the investigation of the banking liabilities and assets of the United Kingdom to a point not previously attained, is due to the circumstance that in 1875 much more copious data were available for the purpose than in 1851 or even in 1872.

The author is under great obligations to Mr. Newmarch for valuable information and advice upon many of the most important points embraced in the paper.

He thankfully records his acknowledgments for the ready response which his inquiries almost invariably elicited from the officials of banks whom he had occasion to trouble for information.

He would also gratefully acknowledge the invaluable assistance received from Mr. W. D. Hughes and other officers of Parr's Banking Company, Limited, in compiling and checking the tables and in making and verifying the innumerable calculations which this investigation has involved. Although no effort has been spared to secure perfect accuracy, it cannot but be, where such masses of figures had to be dealt with, that some errors have crept in, and any reader who detects an inaccuracy, will confer an obligation on the author by pointing it out by letter addressed to him at Warrington.

DISCUSSION *on* MR. DUN'S PAPER.

MR. NEWMARCH, having referred to the practical experience of Mr. Dun as well qualifying him to deal with the subject, said that he took some credit to himself for having stirred up the author to prepare the paper, which he had no hesitation in saying, was by far the most complete and exhaustive exhibition of the banking statistics of the United Kingdom that had ever been presented to the public. In 1851, he (the speaker) had read a paper on the same subject; and in 1871, Mr. Palgrave, who was thoroughly acquainted with the whole of the practical administration of banking, presented to the Society, and published in a separate form, a statement which was entitled to take rank with the paper presented by Mr. Dun. There were, therefore, now three statements of the same facts at three different epochs. The progression of the resources of the banks exhibited by those figures was of the most marked character. As regards the general comparison of the results of the inquiry, Mr. Dun had given columns of percentages which enabled them to follow without inconvenience the changes which had taken place, and the relative importance of the several items. In 1851 the London banks stood at 64 million pounds; in 1871 they had advanced to 174 million pounds; and in 1874 they had further advanced to 250 million pounds. Then came the country banks, and then came the Bank of England, which in 1851 stood at 36 million pounds, representing 14 per cent. of the total. In 1871, it stood at 16 million pounds, the proportion having fallen to 10 per cent.; and in 1874, it stood at 70 million pounds, the proportion having fallen to 9 per cent. If the last column of proportions given in the paper was compared with the corresponding figures in 1851, they would find that in that year the London banks were 25 per cent., and in 1874 they were 32 per cent., and that in 1851, the country banks were 37, and had, in 1874, fallen to 32; while the Bank of England, which, in 1851 was 14 per cent., fell, in 1874, to 9 per cent., while the resources of the private and joint stock London banks had risen from 161 million pounds to 310 million pounds or, in other words, representing 62 per cent. in 1851, and representing 64 per cent. in 1874. The Bank of England was represented by 14 per cent. in 1851, and only by 9 per cent. in 1874. One of the great lessons that had been taught by Mr. Dun's paper was that the relative superiority and supremacy of the Bank of England during the whole of the last twenty-five years had been continually and progressively diminishing, as regards the other banking institutions of the country. The diagram given by Mr. Dun represented a very fair summary of the whole case. It would be seen that the resources wielded in London by the private and joint stock banks amounted to 193 million pounds, to which must be added 60 million pounds more, which represented the resources wielded by the provincial banks, making the total resources wielded in London, outside the Bank of England, 250 million pounds; to which had to be opposed only the 70 million pounds wielded by the Bank of England, or about one-fourth; whereas twenty years ago, the resources wielded by the Bank of England were 36 as against 161. It would also be found that the resources of the whole of the private and joint stock banks out of London amounted only to 256 million pounds while the resources of the banks in London, exclusive of the Bank of England, amounted to nearly the same sum. The monetary force in the metropolis was nearly the same as the monetary force outside the metropolis, excluding Scotland and Ireland. Another marked result shown by the inquiry was the relatively small amount of circulation. It was a well-known fact that in London there was no circulation except that of the Bank of England, which amounted to 25 million pounds. The circulation in England and Wales, including the private and joint stock banks, was under 5 million pounds, compared with their banking resources of 256 million pounds. It would be almost impossible to mention a fact more entirely condemnatory of all the old theories and discussions about currency, which were chiefly concentrated on bank-note circulation, leaving out of view that which constituted the real power of a bank, the lending of its deposits and of its resources outside its circulation. In Scotland there was a contrast scarcely less striking. There was there a circulation of 6 million pounds, against total banking resources of 100 million pounds. In Ireland the case was somewhat stronger. There was there a circulation of 7 million pounds against total banking resources of 48 million pounds. These figures confirmed in the strongest degree the doctrine enunciated by Thomas Tooke, that the real force and power of banks did not consist in the administration of their circulation, but in the administration of their capital and resources; in other words, the controlling power was not the variation of circulation, but the variation of the rate of interest. The progress of wealth in the country had given emphasis to the doctrine, which, twenty-five years ago, had only begun to be apparent. The result was that the resources now administered by the banks, as shown by Mr. Dun, amounted to 664 million pounds, which, on the whole, was rather under than over the mark. This state of things had been brought about in consequence of the allowance of interest by the joint stock banks being at rates very closely approximate to the extreme rates to be obtained in the market. The character of the banks for solidity being established, the public found them so convenient that they had come to use them as investment companies. The London banks, especially, had begun to give a rate of interest so near the extreme rate afforded by the market from month to month, that large classes of the public—especially during the last fifteen or twenty years, when the wealth of the country had grown so rapidly, and when it had been found a matter of necessity, in consequence of the disturbed state of feeling and politics on the continent, that the large monetary and exchange institutions of the continent should be transferred—had a strong tendency to convert the banks into investment institutions; hence the rapid increase between the figures exhibited by Mr. Palgrave, in 1871, and those exhibited by Mr. Dun, to the end of 1874, an interval of only about four years.

In 1871, Mr. Palgrave, speaking of the whole of the United Kingdom, gave his figures at 662 million pounds; Mr. Dun, four years later, gave his figures at 802 million pounds, which was a most enormous advance in so short a space of time. Hence the difficulties which the London banks—especially the joint stock banks—have lately had to encounter in making an adequate margin of profit upon the deposits held by them. His own opinion was that the efforts had not been serious enough, and the alterations had not been radical enough to overtake the evil. There could be no hesitation whatever in laying down as one of the sagest canons of bank management, that the moment it is converted into an investment company it entered upon a dangerous course. It was no part of its function to find profitable and useful investments to the rest of the community. Whenever floating capital was accumulated in banks beyond a certain amount, that very moment the course of danger was entered upon, the end of which could only be disastrous to all parties concerned. The banks had been considering for the last three or four months what remedy could be applied to that state of things. The remedy was to diminish the rate of interest on deposits, and to take their stand on the sound commercial principle that as they were dealers in a commodity, they could not afford to give more for that commodity than would yield them a fair profit. Whatever delays or variations took place, the instinct of self-preservation might be depended upon as sufficiently potent in the end to produce a corrective of the present evils. Another obvious question which arose from Mr. Dun's figures was, in what manner the enormous mass of liabilities to the proprietors and to the public could be amply secured. It had been already shown how the former supremacy of the Bank of England had fallen away, and they could also learn from other sources, as well as from Mr. Dun's figures, that there had been no alteration whatever in the arrangements made by the law as regards the ultimate reserve of coin and bullion held against the whole of the banking liabilities of the country. It was as true in 1875 as it was when he (Mr. Newmarch) wrote his paper in 1851, that the solidity and the ultimate realisation of the whole of those assets depended entirely upon the bullion reserved as a last resource in the Bank of England. One of the most alarming considerations which arose out of Mr. Dun's figures was that the deposits and liabilities practically payable on demand continued to be piled up, while no adequate measures were taken to strengthen the foundation. That was exactly the present necessity and the present difficulty. He held it to be disgraceful to a mercantile country like England, which understood a great deal more of the science of political economy and the science of banking than any other country in the world, that the whole of the mercantile system should be permitted to be at the mercy of small variations in the reserve department of the Bank of England. He considered that one of the beneficial results which would arise from Mr. Dun's paper would be to direct public attention more and more strongly to the necessity of strengthening the foundation. Until this was done they would continue to be subject to those spasmodic and nervous alarms which every now and then spread over the country. The time had come when the whole case must be reconsidered. He brought no accusation against the Bank of England, or against any one; but the progress of time and events, the accumulation of wealth, and the changes that had taken place in the mercantile world, had produced a state of things which was not and could not be foreseen, and which was not and could not be contemplated. He therefore thought that a Royal Commission should be applied for, composed of thoroughly experienced and competent members, and that it should take its stand on the great principles of the Act of 1819, having regard also to the changes made in 1844, and that it should inquire how far circumstances and events had modified the views which at that time prevailed. He had no hesitation in declaring it to be his most emphatic opinion that until an inquiry of that kind was taken in hand, and until they addressed themselves in a true spirit of science to ascertain what alterations were necessary in order to strengthen the cash foundation of such an enormous mass of liabilities—nearly 700 million pounds—they would be in a state of great peril.

Mr. W. Tayler said that the greatest possible credit was due to Mr. Dun for his statement, which was as exhaustive as any that had ever appeared. From his own experience he had found that the proprietors of a bank seldom or ever looked into the balance-sheets or inquired into the solidity of the bank. They seemed to know nothing but dividend. Some years ago, he became one of the founders of one of the largest joint stock banks, which had succeeded beyond all expectations. But then came the question, as Mr. Newmarch had pointed out, of large possessions which had been built upon small beginnings, and which involved such large liabilities that they made one shudder to think of in the event of any mischief arising. He thought that something should be done to amend the state of things which Mr. Newmarch had pointed out. The substratum must be amended, and there ought to be means by which the public could have more confidence, because it was quite impossible that they could trust to things as they were. The joint stock bank to which he referred made it an apology that though their neighbour, the London and Westminster Bank, had lost simply half a million, that their loss had not quite amounted to 100,000*l.* But who was to pay that? It must come out of the shareholders' pockets. Was there not a freemasonry in banking, or some system by which the rogues that infested the commercial world could be recognised? He contended that legislation in a great and comprehensive form was absolutely necessary, and that statements in detail should be furnished by every bank. The way would then be open to obtaining a reasonable security for the extraordinary amount of money in the hands of the banks as deposits which were frequently almost the whole resource of the investors, the depositors being largely clergymen and widows, with very few landed proprietors. He instanced the Scotch banks as being as well conducted as banks possibly could be. Almost the whole capital of Scotland was invested in deposits by merchants and people of all classes and descriptions, who had confidence in the principles with which they were conducted and carried on.

Mr. B. Noble (of the North Eastern Bank, Newcastle-on-Tyne) said he was sure that banks had as much reason as the general public to hope that by-and-by the publication of bank accounts might be more complete, so that the Society might hereafter have the good fortune to hear papers more exhaustive still than Mr. Dun's, and which would throw still more light upon one of the most important of social problems. He felt bound to differ a little from the remarks of Mr. Newmarch, who had said that the whole of the banking system of late years had been built on the foundation of the comparatively small amount of gold which was to be found in the coffers of the Bank of England. Possibly the amount of gold in the Bank of England had not increased so much since 1844 as it might have done; but with much deference, he submitted that that was not the basis upon which our banking transactions rested; they rested on the whole stock of gold to be found throughout the country. There was a vast treasure of bullion in this country, but it was not available for the purposes of reserve. They were all agreed that it ought to be made available; but, before asking for a Royal Commission, the banking profession should make up their own minds as to what should be done, and go to the Government with a well considered proposal.

Mr. W. P. Pattison also thought that a Royal Commission should be appointed to inquire into the subject. Mr. Noble had said that the liabilities of the banks of this country did not depend upon the gold in the Bank of England, but upon the gold of the country. The bankers, however, held 800 millions of deposits and current accounts upon short notice. How could they use the gold in the pockets of the people of the country in a time of panic, when they would be sure to keep it to meet their own liabilities? The gold most easily attainable was the gold of the Bank of England, which in fact is the only available supply. As to the amount of capital which banks ought to have, Mr. Dun had quoted the opinion of Mr. Gilbart that banks should have one-third of their liabilities in paid-up capital. Mr. Dun had suggested a fifth or sixth. He (the speaker) thought that the important thing was to get rid of the immense premium on the shares, which was a fruitful source of panic. It would, in his opinion, be an exceedingly wise course for the banks never to declare more than 10 per cent. of dividend on their paid-up capital. Recently, in consequence of great failures having taken place, the shares of the London and Westminster Bank fell from 78 to 70, then to 57, and there was risk of the depositors becoming alarmed. At another time such would have been the case. He thought the London and Westminster would do wisely to increase their capital to 5 millions, and their reserve fund to 2,500,000*l*., instead of paying high dividends. A 10 per cent. dividend would place the shares at a small premium in the market, but they would have a very different class of investors. A large paid-up capital and large reserve would give a sense of security second only to the Bank of England, and men of means and business standing would be found in large numbers among the proprietors, instead of small tradesmen and women of moderate means, which is to a large extent the case at present. In reference to the recommendation of Mr. Dun that the joint stock banks should have their own cash reserve, that of course would entirely alter the system of business in this country. The Bank of England had for a long period held the cash reserve, and he did not see why arrangements should not be made between the bankers and the Bank of England by which the Bank of England should receive an annual sum paid to them for managing the business of the bankers, the bank undertaking to hold unemployed any amount of balances which the bankers chose. One reason why the bankers were not able to increase their balances *ad libitum* in the Bank of England was that those very balances were brought into competition with them in the market, and destroyed their profits. The proper thing for bankers to do was to increase the rate of profit and to diminish the amount of money to be employed. In that way they would immediately diminish the amount of money placed with them on deposit, which was practically on the part of the public a kind of investment, and have more working balances. Mr. Dun suggested that the reason why the amount of cash at the command of the Bank of England should be very largely increased, was because London was the centre of exchange for the whole world. It is remarkable that London has only one-third of the amount of cash held by the Bank of France, and it seemed to him that if the exchange operations of the world were to be settled in London, *there* should be the largest amount of bullion. He thought that very great advantage might accrue from the legislature requiring the weekly publication of accounts by the London banks instead of half-yearly. If this were done they would have a very much larger reserve than they now had. It is well known that at the date the accounts are published the balances of cash are run up. He thought that the waning power of the Bank of England referred to by Mr. Newmarch, as compared with the other banks, partly arose from the Bank of England treating the deposits of bankers just as it treated the deposits of its customers. This, in the first instance, causes smaller reserves all round, and keener competition among lenders. If the Bank abandoned this practice bankers would prefer to be safe, would augment reserves, and would lower rate of interest for deposits. Larger current balances would become customary, the Bank terms of discount would become nearer those of the market, and its constituency would increase. He could not see how Parliament could deal with the question without having before it in some succinct form all the facts which bear upon the present state of banking in the country. The conditions of business, and the relations of the London market to the rest of the world, have vastly changed since 1844. The only way to obtain a satisfactory result was to move the Government for a skilled commission in which the House would have great confidence.

Mr. R. B. Martin said that the balances of the various banks at the Bank of England were rather money in their tills than reserves in the ordinary use of the term. The banks only left at the bank sufficient money for their daily wants and to "pay their clearing;" and if they found it absolutely impracticable to employ their funds in their business, might just as well lock up their surplus in their own vaults, except as a matter of convenience. In former times, and indeed till within the last few years, this was done, and whenever a banker's balance exceeded a maximum, he withdrew a portion and locked it up in bank notes in his own custody. He quite agreed with the author of the paper as to the danger of banks drifting into the practice of regularly accepting bills and thereby competing with the merchants. Such a departure from the pure system of banking for the sake of increasing profits was much to be discouraged.

Mr. ARCHIBALD HAMILTON considered it would be an advantage if the joint stock banks were compulsorily put under limited liability; of course with a margin of uncalled capital. Many of the disastrous and discreditable failures which had taken place were no doubt due to the credit acquired by the banks by reason of the unlimited liability of the shareholders, whereby their powers of mischief were fatally enlarged, as was exemplified in the cases of the Liverpool Borough Bank and the Western Bank of Scotland. Another advantage would be that instead of deposits being attracted, as at present, to a few centres in consequence of the security afforded to creditors by unlimited liability, the deposits would be distributed among a greater number of bankers. The London and Westminster, London Joint Stock Bank, and Union Bank of London, together hold deposits of about 65 millions, which is a constant source of anxiety and danger. No sooner are there indications of danger ahead, than it becomes the duty of the directors of these banks to adopt defensive measures, which, however, increase the stringency and intensify the crisis when such a calamity ensues. If 65 millions, instead of being absorbed by three banks, were distributed among ten or twelve, each obtaining its deposits according to its capital and reputation, a more satisfactory state of matters would result.

Mr. HERBERT CRICKMAY asked if the statement of Mr. Newmarch in regard to the decline of the supremacy of the Bank of England in the matter of capital and liabilities was not capable of much modification. Of course twenty-five years ago the capital of the bank was much larger in proportion to the bulk of the banking capital of the country than it was now, and it was, therefore, a physical impossibility that, in this respect, it could sustain its supremacy. As regarded deposits, which prove the chief item of liabilities, the bank never sought supremacy, having studiously avoided giving interest thereon. The huge mass of deposits which the joint stock banks had accumulated was, as Mr. Newmarch said, one of the chief difficulties of the present day, and it was one from which, it must be admitted, the bank was happily free.

Mr. DUN in reply thanked the members for the very friendly and considerate way in which his paper had been received, and

Mr. Newmarch, in particular, for the very weighty words he had spoken in its favour. To Mr. Newmarch he was in no small measure indebted for much that was valuable in his statement. He quite agreed that it was perfectly possible for the joint stock and private banks of London to hold for themselves an ample cash reserve, and he thought that ought to be the practice. By not holding their own reserves, the other banks were incurring extreme danger. He thought that the bankers ought not to wait for a royal commission, but ought themselves to move in the matter, and that they should hold the reserves they ought to hold under the present system of legislation in the country. No bank, however strong, could stand a protracted run on its deposits, and the larger the bank the more important was it on public grounds, as well as for the safety of the bank itself, that the bank should hold such an amount of actual cash as would enable it at all events to stem the beginnings of distrust. Safety was the first and last and great consideration that a bank should have, and after that let them begin to think of profit. That safety consisted in having a large substantial foundation of legal tender, and after that there should be such large reserves, both at home and likewise in continental bullion markets, as would enable them to command a further free supply of that legal tender. That was the only way to prevent panic.

The President, in moving a vote of thanks to the author, expressed his opinion that in the case of joint stock banks the directors ought not altogether to trust to the manager, and that the chairman and leading directors ought to exercise supervision over the advances proposed to be made. He did not mean to say that a royal commission would not be necessary; but the Government would not grant it unless there was a case put before them, and he did not think that the proper time had arrived for doing so. He was favourable to the returns suggested being moved for in the House of Commons. He congratulated the author on his paper being a most thorough and exhaustive one.

Dr. Farr asked Mr. Dun whether he could suggest to the Council any series of returns which he thought it might be advantageous to bring before the notice of Her Majesty's Government.

Mr. Dun said that in the course of his paper he had suggested the form of a balance sheet, which he thought ought to be published annually by every bank, which might serve the purpose to which Dr. Farr referred; but if the Council thought of taking action in the matter, he should prepare very carefully a balance sheet or other form which might meet the requirements of the case.

Dr. Farr then moved "that Mr. Dun be requested to draw up some form of balance sheet which he thinks might be recommended to be brought under the notice of the proper authorities."

Mr. Lumley, Q.C., seconded the motion, which was carried.

OPENING ADDRESS *of the* PRESIDENT *of the* DEPARTMENT IV, "ECONOMY *and* TRADE," *of the* NATIONAL ASSOCIATION *for the* PROMOTION *of* SOCIAL SCIENCE, *at the* NINETEENTH ANNUAL CONGRESS, *held at* BRIGHTON, *in* OCTOBER, 1875. *By* M. E. GRANT DUFF, ESQ., M.P.

WHEN your General Secretary on behalf of the Association did me the honour to ask me, some weeks ago, to preside here to-day, my first impulse was to decline, because I felt it would not be in my power to prepare such an address as I should have liked to have delivered to so distinguished a company as that which I see before me, without neglecting other work to which I had committed myself. Before, however, I sent an answer, the thought occurred to me that there was one subject highly appropriate to be brought before this section, on which it was very desirable that some one should utter a word of warning, that I might be able to do so, as well as another, and that anything I might say would go forth to some degree recommended by its having been said to you.

The subject to which I allude is the present condition and immediate prospects of our commercial treaties.

When, in the year 1846, free exchange achieved so great a triumph by the repeal of the corn laws, those who had been most anxious for that measure were so confident that the experiment would be greatly successful, that they expected that other nations would rapidly follow upon the same path. These sanguine expectations were not justified by events. Europe saw, indeed, with astonishment the great improvement in English trade, as well as the happy political results which ensued from the victory of Cobden and his allies; but false theory, evil custom, and, above all, sinister interests, were sufficient to prevent our example being followed to any considerable extent.

It might be imagined by persons to whom the subject was new, that our diplomatists had not done enough to call the attention of other nations to the great success of the English experiment, but there could not be a greater mistake. The Foreign Office, under various chiefs, and the Commercial Department of the Board of Trade always, were instant and urgent, no one pressing the moral more home than Lord Clarendon, who was so much liked and respected on the continent.

At length, after having waited very long and very patiently, Mr. Cobden, M. Chevalier, and some other friends of the good cause determined to change their tactics.

There was at that moment on the throne of France a prince, who had become a convert to Free Trade, and who possessed in the year 1859 almost absolute power. That prince knew that he and his dynasty were not beloved by the great majority of the men of high intellect in France. He believed at that time that it was impossible for him to conciliate the safety of his throne with anything like a real Parliamentary Government. He felt accordingly, that the best chance for him and his was to confer great material benefits upon his people; and he knew that the likeliest way to do this was to give to trade and industry that great development which could, he was well aware, only be given by doing something in the direction of freedom of exchange. It would be most unfair, too, not to add that he had a genuine feeling for the masses. You recollect, I dare say, Henry Heine's phrase: "It is all in vain; the "future belongs to our enemies, the Communists, and Louis "Napoleon is only their John the Baptist."

Again, he had learnt from the story of his uncle and from his own early experience, that England was a tremendously great and formidable power. *Timor Angliæ initium sapientiæ*, as M. de Laveleye said the other day in speaking of him. But he also knew that in the years 1858-59 the pressure put upon his Government to pick a quarrel with England had been a great deal stronger than was pleasant, and there were moments when he himself believed that England wanted to pick a quarrel with him. Most of us remember how intensely anti-French was the feeling of London society during the war which ended with the peace of Villafranca. Well, a little before that event, he himself said to one who was much with him then in Northern Italy, and who repeated the statement to me, that "he expected every day when he got up in the "morning to hear that the Government of Lord Derby had declared "against him."

I spent the winter of 1859-60 in Paris, and know of my own knowledge that the feeling against England in many circles was one of great irritation. Victor Cousin, for example, said to me, "You English are thwarting our policy in Italy—you are insulting "us, but we insult nobody."

Napoleon, however, was well aware that all this international discomfort did not arise from any real divergence of national interests, and that the best way to get rid of it would be to bring the two nations closer together through the bonds of personal and mutually beneficent intercourse.

All these causes united to make him extremely disposed to listen to the suggestions that reached him from the side of Mr. Cobden and M. Chevalier, and you all know that these good dispositions on his part and the suggestions on their part bore fruit in the French Commercial Treaty of 1860.

That treaty was severely criticised by many, from many different points of view. Some criticised it from the good old protectionist point of view. "The invasion of this or that English product will "injure our English manufacturers," said the English protectionist. "The invasion of this or that French product will injure our French "manufacturers," said the French protectionist. Others criticised it from the purely political point of view. "What you have done," said some English politicians who thought more of politics proper than of commerce, "is no doubt excellent, but you buy gold too "dear; you strengthen a dynasty which is hostile to parliamentary "institutions and is opposed by the best intellect of France."

"What you do is desirable in itself," said some French politicians, "but it is a sad mistake to have done it in the way you have done "it. No reform of this kind will be durable in France unless the "protectionists are fairly warred down in parliamentary strife. You "are building your house upon the sand of imperial will, not on the "rock of national will, and in doing so you are putting a slight upon "us, the representatives of free political institutions in France, and "England's truest friends."

A third party criticised it from the point of view of free trade gone mad. "The only way," said they, "to spread the true faith "of Adam Smith is by example and precept. There have been a "great many *bad* commercial treaties in the world, *therefore all* "commercial treaties are bad. There have been commercial treaties "which have bound the contracting parties *not to give* advan-"tages to other nations. It follows, therefore, that commercial "treaties which must have the result of *giving great and immediate* "*advantages* to other nations are a delusion and a snare. Accursed, "therefore, be he who proposes, concludes, or defends a commercial "treaty! May the doom of the rebuilder of Jericho be upon "him!"

In spite, however, of all these objections, the French Commercial Treaty of 1860 came into force, and began to spread its influence far and wide. France knew, when she concluded the treaty, that England having quite given up charging one duty on the same product if it came from one nation and a different duty if it came from another nation, would by the mere fact of concluding a treaty with her to allow certain French goods to come in without duty, be *ipso facto* and at once allowing similar goods to come in without duty from whatever nation they came; and England knew, when she concluded the treaty, that France intended to give the same advantages as she gave to England to all states which were willing to treat with her on the basis of the treaty she had just concluded with England.

The new *good* commercial treaty accordingly was an absolute disclaimer and repudiation of all that desire for *exclusive* advantages which was of the essence of the old *bad* commercial treaty.

Previously, however, to the conclusion of the French Commercial Treaty of 1860, England had a great many treaties with other nations, by which those nations bound themselves to give to England as good treatment as they gave to the most favoured nations. When then, France had concluded with any of these nations a commercial treaty based on her English treaty, by which she, France, became the most favoured nation, England, one instant after, got into precisely as good a position as France with reference to that nation. As then France had got rid for all other nations of nearly all English duties whatever on their products, so France got rid for England of a great part of the duties levied upon English products in the ports of most European nations, and as almost every nation had taken care to stipulate that it should be in the position of the most favoured nation, the benefit went on extending itself very rapidly.

Meanwhile some new commercial treaties were concluded directly between England and other countries. There was one concluded with Turkey on 29th April, 1861, which did much credit to the statesmen of that country.

There was one concluded with Belgium on 23rd July, 1862, in which she made some important concessions as to matters of detail.

There was one concluded with Italy on 6th August, 1863, by which, in addition to promising to put us in the position of the most favoured nation, the Italian Government engaged not to *prohibit* the importation into Italy of any kind of British goods, and made certain other very desirable arrangements about the way in which import duties should be calculated.

There was a treaty with the Zollverein securing to the contracting parties the most favoured nation treatment, and stipulating that neither of them should prohibit the exportation of coal or levy any duty on its exportation. This treaty, by the way, was remarkable as being the first in which England bound herself for her colonies.

Austria, however, remained the great citadel of protection, and in consequence of the uncomfortable political relations which existed between her and France, the initiative in negotiating with her was taken by England. Accordingly, negotiations began, first informally through Mr. Somerset Beaumont and others; at length formally, through Sir Louis Mallet and Mr. Morier; till on 16th December, 1865, a treaty was concluded with her, and on

30th December, 1869, a further convention was made, which stipulated that all British produce and manufactures, except cotton and woollen, with regard to which special arrangements were agreed upon, should go into Austria upon the same terms as the produce of the Zollverein.

By this time a whole network of treaties had been concluded between various members of the European political states' system, all having the same tendency as those to which I have alluded.

The year 1870 accordingly found us in this position: All the great trading nations of Europe, England, France, the Zollverein, Austria, Italy, Holland, and Belgium were one great international body, by all whose parts the principle of stipulating for exclusive advantages for its own commerce *seemed* to have been abandoned, and not one part of which could take off a duty without every other part at once enjoying increased facilities for its commerce; while within this body the operation of the favoured nation clause was, as we have seen, such as to make the arrival at almost unlimited freedom of exchange merely a question of time.

Checked to some extent, no doubt, by the events of that terrible year, the good influences which had been set on foot by Mr. Cobden and Sir Louis Mallet worked on and on, gathering strength with every month that passed over our heads, till at last, in 1873, the following results could be noted. Our trade with France had risen, in round numbers, from 26,000,000*l.*, at which it stood the year before our commercial treaty with that country, namely, 1859, to 73,000,000*l.* Our trade with Belgium had risen from 8,000,000*l.*, at which it stood the year before our commercial treaty with that country, namely, 1861, to 27,000,000*l.* Our trade with Italy had risen from 8,000,000*l.*, at which it stood the year before our commercial treaty with that country, namely, 1862, to 12,000,000*l.*

Look now at 1865, the year preceding the general establishment of the new network of commercial treaties. In that year our trade with Germany was 44,000,000*l.*, in 1873 it was 56,000,000*l.* Our trade with Holland was 27,000,000*l.*, in 1873 it had risen to 37,000,000*l.* Our trade with Russia was 23,000,000*l.*, in 1873 it was 32,000,000*l.* The total of our imports and exports, excluding those to and from British possessions, had risen from 245,000,000*l.* in 1859, to 530,000,000*l.* in 1873. The value of the produce of the United Kingdom sent to European countries and to their dependencies had risen during the same period from 45,000,000*l.* to 113,000,000*l.* I do not think it would be possible to point to any measure in English history which so rapidly and so noiselessly produced such vast results as that which we debated in the session of 1860.

And let it not be forgotten that every one of these increases of

English trade implied a vast increase to the trade of other countries, so that the impulse given to the *general* prosperity of Europe is quite incalculable. Remember further, that this increase of European trade implies a far greater amount of increased prosperity to the working class than would have been created by a similar increase to the amount of trade with distant countries which it takes a long time to reach, such as India or the Australian Colonies. That trade will be most profitable to our manufacturing population which most rapidly turns over capital, and is constantly calling for new supplies of goods to be distributed.

I am aware, of course, that there is a certain difference of opinion as to the exact amount of effect in the production of all this prosperity, which is to be assigned respectively to the commercial treaties and to other influences, such as the extension of the railway system, but it is sufficient for my argument that a very large part of the effect is due to the commercial treaties, and that is not now disputed by any one for whom my observations are, on this particular occasion, intended.

Such, then, being the results of the modern commercial treaty system, is it necessary to do anything more than simply congratulate each other upon these results? I am sorry to say, gentlemen, that it is necessary to do a great deal more.

These commercial treaties were each and all of them great concessions to freedom of exchange; each and all of them had the tendency to bring nearer that remote but blessed day when there will be no such thing as customs duties from one end of the world to the other, when we shall as soon think of making a merchant give us some of his goods, or a traveller give us some of his luggage, for the privilege of bringing them into our country, for that is what it comes to, although we make our exactions in coin and not in kind, than we do now of pulling his teeth for the same privilege. They were accordingly extremely distasteful to all the persons who consider that customs duties are a highly desirable and proper method of raising the revenue, while they were the very abomination of desolation to all those sinister interests which had been buoyed up by the old system of absolute protection to native industry. A man who had made his fortune and trusted largely to increase the same by selling indifferent iron to his countrymen in France, would naturally look with little love upon the persons who diminished his profits and perhaps imperilled his fortune by pouring in good iron and forcing him out of the market.

There was a time when, if the *Governments* had been thoroughly convinced, the irritation of these people would have had little effect; the Governments would have held on their way and allowed them to sink or swim.

The last half-generation, however, has happily seen an enormous development of parliamentary institutions on the continent of Europe. There have been a great many changes in our own country in the last half-generation, but the general aspect of affairs, to a superficial observer, who happened to visit this part of the planet, coming say from the moon, would be much the same. But in almost every other country of Europe the changes are palpable and enormous, and in almost every one of these countries the sinister interests have, as was only natural and right, worked to the utmost the new weapons which circumstances have placed in their hands. There is, accordingly, in almost every part of Europe a very strong movement to get these commercial treaties, when the periods for which they were concluded come to an end, set aside in whole or in part.

But in addition to their open foes, they have a great many secret foes, persons who hate them as the strongest allies and instruments of their bitterest enemies; and, gentlemen, it is a very true instinct which makes persons who cling to this old idea that the natural state of man is war, and who are perpetually repeating the maxim, *Si vis pacem para bellum*, abhor a huge machine which is perpetually working to the tune, *Si vis pacem para pacem.*

Against these commercial treaties and the way of conceiving international relations with which they cohere, are arrayed all these forces which used to be summed up in France under the name of Chauvinism; but which are, unhappily, by no means confined to France—flourish indeed very largely in our own country, all those forces which are combined in the pregnant and energetic phrase which I dare say we have all of us often heard, "I hate foreigners."

With these commercial treaties as natural allies stand all the men who look, as I confess I do, to *diplomacy* as the great engine for drawing the nations closer and closer together. Against them are, or should be, arrayed, if they knew their own interests, all those who look to big battalions as the great means of advancing civilisation.

Some of you may have seen the reports on the prospects of free trade lately made to the Cobden Club and published last month, but as many of you have probably not seen them, I make no apology for quoting some portions of them. They will show you that we have have a great deal more to do than merely to congratulate ourselves on the results of the new commercial treaty system.

Mr. Max Wirth, a very distinguished statistician and economist, after describing the recent commercial crisis in Germany and Austria, writes as follows:—

"With the destructive outbreak of the crisis which, although it "began at the Bourse, soon reached every branch of industry in "Austria as well as in Germany, protectionism reappeared and "offered to heal the wounds received by industry in the crisis. To "effect this protectionism proposed giving up the treaties of commerce, all of which cease with the year 1876, and raising the "duty on imports. The wool manufacturers of Brünn were the "first to utter an opinion of this kind, because they found themselves at a disadvantage, occasioned by the additional treaty of "1869. Next came the owners of the ironworks; and both branches "of industry succeeded in obtaining the attention of the Government and the Reichsrath, so that their position was made the "object of an official *enquête*. In the spring of 1875 protectionism "succeeded in obtaining a triumph over free traders in the "Austrian Congress of Economists, but merely by a total majority "of voices, declaring itself altogether against the renewal of the "treaties of commerce and for autonomy in the tariff, which is in "future to be raised. At the same time the protectionist party "gave signs of life in different parts of Germany, especially in the "Prussian Landtag and in the Bavarian Reichsrath."

Mr. George von Bunsen writes from North Germany:—

"In Germany, too, plaintive voices have made themselves "heard in parliament and in the press or among manufacturers. "When they speak much—and certainly not too much—of the "astounding advance of French manufacture, do they attribute it "to its real cause, viz., a fixed patriotic determination to work "very hard, to work very well, and to work for fair wages peaceably? No, protection forsooth must have done it—the new "laws of 1871 and 1872 were the panacea—and nothing but "M. Thiers' reaction against those very principles, which the "Anglo-French Treaty of Richard Cobden has formed into a "leaven of the civilised world, could have saved France. The "same error of judgment induces the same people to ascribe the "present discouraging appearance of trade in Germany to our "return to those more advanced economic rules which Prussia, to "her honour be it remembered, was the first to inaugurate so "early as 1818."

Mr. Montgomery Stuart, in the course of an extremely interesting letter, dated Rome, 20th July, observes: "One has been so "long accustomed to regard Italy as the classic land of free "trade, that it is at first somewhat difficult to realise the fact of "any strong protectionist movement in that country."

He then proceeds to explain that the only Italian state in which free trade doctrines were not only generally accepted in theory, but embodied in legislation, under the old *régime*, was Tuscany. He then shows how Mr. Cobden's Italian tour of 1847 strengthened the hands of the advocates of the good cause, and how it was immensely advanced by the splendid energy of Cavour.

" No wonder then," he observes, " if the successive annexations " to Sardinia of the other Italian states, and the immediate " extension to these states of the commercial legislation sanc- " tioned in the north, were regarded as the definitive victory in " Italy of free trade over protectionism. Ancient historical " traditions and recent political experience combined—at all events " appeared to combine—in making a policy of commercial freedom " a prominent element in the national programme. How comes it " then, one is naturally tempted to inquire, that only fourteen " years after the death of Count Cavour, the possibility of a protec- " tionist reaction with any chance of success should be so much as " dreamt of? I believe that the explanation must be sought in " various and quite different causes."

These he finds in the reaction after the death of Cavour in the ignorant protectionism which flourished, like all other evil things, in the old kingdom of Naples, in the accident which brought into power a cabinet more or less dependent upon Piedmontese protectionist manufacturers, on the annexation of the Venetian provinces, which carried into the Italian Parliament some protectionist theorists, and above all on the evil effect of the *octroi* duties throughout the Peninsular. Every commune which is cursed with an *octroi* becoming, *ipso facto*, a stronghold of protectionism.

" One might," he says, " fill a volume with the calamitous " results of the *octroi* on national production. In the first place, " there is created an immense disproportion between the price of " provisions in close and open communes, and between the town " and the country. The causes creating this disproportion, whilst " acting first and immediately on home, do not the less act with " crushing effect on foreign trade. Take, for example, the product " in which, from its geographical position and its territorial con- " formation, Italy seems, as it were, destined by Providence to be " one of the world's great exporters, quite as much so as France, " Germany, or Spain—I mean, of course, wine. By the *octroi* " system almost every motive, so far as the home market is con- " cerned, is taken away from the landed proprietor, and much more " from the common peasant cultivator, to improve his wines. The " law gives to the municipal councils the power of establishing a " tariff with a minimum and a maximum duty. The minimum " duty is constantly imposed for such articles as vegetables, which " most easily supplied from the immediate neighbourhood, are " furnished by the local proprietors; whilst the maximum is just " as regularly imposed on the wines, which may enter into com- " petition with those grown by the same proprietors. The distant

" wine-grower has, therefore, to encounter the double obstacle of " the cost of the carriage and the maximum duty."

Signor Peruzzi, in a speech made before the Political Economic Society in Paris, on the 6th of August last, spoke with a good deal of apprehension about the probable fate of the treaties of commerce with Italy, while he at the same time promised that the banner of commercial freedom should be held high by his friends and himself. These warnings are quite sufficient to make us feel that it is not a time for those who believe that the commercial treaty network is of vast importance in a thousand ways to the future of Europe, to be negligent or *sinere res vadere ut vadunt.*

As Mr. Max Wirth remarks: " Free traders should by no " means be inactive; they must not allow their fire to extinguish, " or even to flag, for they have found out, from this last attack of " protectionism, that protectionists have certainly learned one " thing from them and from our immortal friend, Richard Cobden " —energetic and persevering defence of their own interests."

I believe, gentlemen, that if we are active in our respective countries, we shall not only succeed in keeping up the existing commercial treaties to a great extent, but that the result of the discussion which we can force on all over Europe will be to enable us to carry our commercial treaty policy still further. I draw great comfort even from the very letters which I have been reading to you, for they show that although we have many enemies, we have many allies, both from conviction and from interest. From interest, I say, because the astounding trade figures which I quoted to you as those of 1873, could not have been arrived at without calling into existence a great number of industries which would be most grievously injured by any serious retrogression on the road upon which Europe has entered.

You will not have failed to observe that when M. Thiers exerted all his power to overthrow the edifice which had been built up so bitterly against his will, between 1860 and the calamitous war which his writings did so much to bring about, his success was after all *extremely* partial. He had to fight, not only all the wiser portion of his countrymen, but a great number of new interests which by no means enjoyed the idea of a return or anything like a return to the *status quo* of 1859.

The same phenomena which we see in France may be seen in other countries. Bremen asks for protection; Remscheid protests against protection. The Austrian Chambers of Commerce ask for protection; Hungary says, "No, no! That won't quite suit " me."

In fact, all over the continent of Europe the two parties are in presence, and the free traders are naturally anxious that the

English Government and individual Englishmen should do all in their power to assist them.

Some months ago, a leading German free trader communicated with a member of the Cobden Club, and proposed that there should be in the later autumn of this year a conference of the friends of free exchange held at Berlin, for the purpose of taking council as to what should be done in order to prevent the overthrow of the treaties when the time for their revision arrives. The overture was met very cordially by the person to whom it was addressed and by some others; but it has since been ascertained by those gentlemen in Germany, who conceived the idea, that it would be impossible to make the necessary preparations before Easter, 1876. The conference, I trust, will then take place, for I have no doubt that it will do good; but a great many months lie between us and Easter, 1876. If the patient is to be saved, we must not let the disease run its course unchecked till that time. I should like to see those who, whether from opinion or interest, are in favour of keeping up or extending existing commercial treaties, bring, in every country in Europe, as much pressure to bear in favour of their views as they possibly can, and bring it without delay. In our own country I should like to see all the centres of industry endeavouring to strengthen the hands of the Government in its negotiations with foreign powers, by enabling it to say, we do not merely press our views upon you because we think them theoretically correct, but because the whole of our manufacturers and many others are up in arms, and the retention, if not the extension of the commercial treaty network is looked upon by our commercial classes as the most important affair which can at present occupy the attention of English diplomatists.

If, gentlemen, we succeed in keeping the *status quo* of 1875, if, that is, we allow the mighty machine that has been working since 1875 to go on unchecked, I think we shall have done a great deal. It is a time of political slack-water all over Europe, and nowhere more than in our own country. Still, although this is so, I do not despair of seeing, I will not say, progress made, in the free exchange direction, but inquiries set on foot which may lead to future progress in that direction. It was therefore with much pleasure that I heard my friend, Mr. Cartwright, give notice shortly before the end of the session, that he would move next year for a committee on the wine duties. It is, you know, alleged by the Portuguese and Spaniards that the way in which we levy our wine duties operates most cruelly to them. They say, "England, with "its cold damp climate, is our natural market, and you English "are also the people who have got most articles to sell which we "want. If you would so alter the mode of levying your wine duties "as to enable us to send you more wine, we should be a great deal "richer and able to buy a great deal more from you. The moment "you alter your wine duties which operate so hardly against us, we "will lower our duties upon a great many of the English things "which we want to buy from you, and you will gain two excellent "new markets in the Peninsular."

I know that there are some people who would tell us that the proper way to meet those remonstrances would be to say, "You "foolish Portuguese and Spaniards, don't you see that, whether "our duties are or are not cruel in their operation with respect to "you, you are merely making your position worse by laying heavy "duties upon your goods which you confessedly want to buy." That is a perfectly good answer, as far as it goes, but it is not a *practical* answer. The best of the Portuguese and Spaniards would rejoin, "We know that perfectly well; we know that it "would be better for every country to take off all customs duties "whatever, but our people have got it into their heads that England, "reversing the old policy of the Methuen Treaty, under which she "treated France unjustly, by keeping her wines out of the English "market in order to favour those of Portugal, is now treating *us* "unjustly by keeping *our* wines out of her market in order to "favour those of France. They have got, we say, this idea into "their heads, and we Peninsular free traders may preach till we "are hoarse without getting it out of their heads. Besides, even "if our Governments were able to take off the duties upon *all* your "goods, in the teeth of their Parliaments, however well it might "be for *us*, it would not do you any *great amount* of good, because, "if you won't take our wine, we have really nothing to buy your "goods with."

These representations, gentlemen, appear to me worthy of very serious consideration, but in reply to them the customs house officials have, I well know, a variety of arguments by which they think they can show that we could only accede to the requests of the Peninsular Governments, at the price of great inconvenience to them, the custom house officials, and considerable loss to the revenue. Well, this may be so, but it is highly desirable that both parties should have an opportunity of submitting their views to the judgment of a select committee, and I believe I am right in thinking that the irritation in the Peninsular would be very much diminished if there was a full and fair inquiry before an impartial tribunal.

If Mr. Cartwright is able to show that the Department of the Board of Trade, and the great and powerful sub-department of the Customs are at issue on this question, as I think he will, the case for a Parliamentary inquiry will be certainly strong.

But the Portuguese and Spanish are not the only people who maintain that some of the English customs duties operate very harshly with regard to them.

The landed gentry of North Germany are, as Mr. von Bunsen tells us, and as is well known, essentially free traders, but they think that the way in which the English spirit duties are raised operates very unfavourably to their interests, and that, if concessions were made to them in this particular, they would be able to persuade their countrymen to make certain concessions which would be highly favourable to the English manufacturer. Mr. Faucher, a well-known economist and free trader, wrote a most elaborate paper upon this subject, which will be found in a volume published by the Cobden Club.

I am not going to express any opinion upon Mr. Faucher's views, any more than I have done upon those of the Portuguese and Spanish complainants, but I think he has made out a case that calls for an inquiry before an impartial tribunal.

If the Portuguese and Spanish, and if Mr. Faucher and his friends can show that the arguments on their side of the case outweigh those which will be brought against them, and *if* it by any chance becomes clear that it will be largely for the interest of English commerce that the changes which they suggest should be made, good and well, we shall have an extension of the commercial treaty system, which I for one shall be, in the absence of overwhelming reasons of convenience to the contrary, extremely glad to see; but the *pros* and *cons* of these proposals are matters for future inquiry. The success of the *existing* network of commercial treaties is, however, no longer a matter for inquiry. It has been proved by the experience of the last ten years, and while I hereby call your attention to the Portuguese, Spanish, and German allegations, I wish to urge each one of you, who has at heart the cause of free exchange and the binding closer together of the nations, to remember the critical position of the treaties, and to work for their support.

MISCELLANEA.

CONTENTS:

PAGE
I.—Some Remarks on the Land Laws of England. By G. W. Norman, Esq. 211
II.—The Climate, Agriculture, Commerce, &c., of Egypt.... 218
PAGE
III.—Lloyd's Statistics of Marine Losses for the Year 1874... 223
IV.—Fires in the Metropolis during 1875 238
V.—English Literature in 1875.. 241

I.—*Some Remarks on the Land Laws of England.*[*]

By George Warde Norman, Esq., F.S.S.

I feel bound to begin what I have to say by an avowal of the unfeigned respect which I entertain for the high character, moral and intellectual, of Sir G. Campbell.

I am aware of the brilliancy of Sir G. Campbell's Indian career, and of the weight which will be naturally attached to his opinions. It is, indeed, this circumstance by which I have been led to make public my reasons for thinking some of these opinions erroneous.

It is not intended in the following paper to expose the whole of Sir G. Campbell's production to a complete and exhaustive criticism, but merely to remark upon some of his prominent opinions, which seem to me to be very erroneous, and to lead to conclusions in many cases impolitic, and in others not merely impolitic but opposed to the dictates of justice.

Thus, then, we are told that there is a radical difference between landed propert and other property:—"That the land was made not by man, but by God; that it was originally the property of the nation, and that certain limited privileges were conceded to individuals for the benefit of the nation, which must be held subject to the will and convenience of the nation."

It seems to me that in this instance the judgment of Sir G. Campbell has been misled by his Indian experience. In India the State is the general landlord, and derives the greater part of its revenue from a rent levied with greater or less severity. The advantages of this system when applicable are very great. If the State did not possess this right over the land, it would have been anticipated or replaced by private owners, for rent is a necessary incident, which merely implies that soils of different quality or situation have been occupied and taken into cultivation, and with different results in respect of produce, or that labour has been expended in permanent improvements; the excess of produce over the cost of production on the soils either originally better, or better cultivated, or otherwise improved, forming in every case the rent.

Rent is not therefore a tax. If it were abolished as respects the rights of the State in India to-morrow, it would still exist and belong to a class of proprietors.

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[*] This paper has special reference to certain opinions expressed by Sir G. Campbell, in a paper read at the Belfast meeting of the British Association, and reprinted in the *Journal of the Statistical Society.*

The truth is, that in India private property in land can hardly be said to exist, putting aside the claims of grantees of different denominations, outside that of the State.

Something slightly resembling this state of things existed under the feudal system in Europe: the land was considered as belonging to the Sovereign, and was granted by him to persons who rendered, when called upon, military service.

The tenure of military service was formally abolished after the Restoration in England, and since that time land has been inherited, bought, and sold without any reservation whatever on the part of the State. It has been considered by all as property, ranking, in point of security of title, in the same category as other property; and to enforce on its owners at present special burdens without compensation would be neither more nor less than an act of robbery.

It is remarkable that the late Mr. J. S. Mill, when proposing to confiscate what he called the unearned increment in the value of land, did not insist upon applying his principle in the case of stocks or shares or other species of property, which when they had risen considerably in value would seem to fall naturally under the principle which he advocated.

The truth is, that property in land, like all other property, is the creation of law. The rights which attach to it are the same as those which belong to the owners of iron, sugar, or wheat. The State would be fully justified in taking possession of all such things, as well as of land, when required for public purposes, but only on condition of fair remuneration to their previous owners.

As the State is precluded alike by law and justice from taking from the owners any portion of their land without compensation, so is it equally precluded from imposing upon it any burthens from which other forms of property are exempt.

I now proceed to make a few remarks upon certain other passages in Sir G. Campbell's paper, taking them as they come, and without regard to their logical sequence.

We are told that "as respects land, Municipal Law apart, the right of individuals to the exclusion of all others is not *primâ facie* apparent and palpable, a matter of morality and equity, as in the case of a stick, or a handkerchief, or a home."

I humbly submit, that the right of an owner to his land is not by any means founded on any abstract notions of morality, but on the rules of positive law, which again have reference to the doctrine of utility.

Landed property to the value of many millions is sold in England every year without any reservation on the part of the State. What would be thought of a law which should at once impose a heavy fine on the purchasers of all such property?

We are then referred to the communal system as explained by Sir H. Maine. This is a matter of interesting inquiry for the historian and antiquary. I cannot, however, conceive what bearing the question can have on the actual rights of landowners in England.

At any rate the system must have been a bad one, and if we are called upon to fall back on the custom of distant ancestors as a rule in this matter, I should propose a condition of things still more ancient and venerable than that of village communities, viz., the hunter state, when no land was appropriated, and the wild population lived on the produce of the chase.

A good deal follows in Sir G. Campbell's paper about the changes which took place in the fifteenth and sixteenth centuries, in which it is assumed that the people were deprived of important rights which they had previously possessed, while the lord "was only the receiver of the customary payments, dues, and services, rendered by the people who really held the soil." Now the word "people" as applied here is invidious and misleading.

It might be held to imply all people, but that form of communism Sir G. Campbell could hardly mean. He means probably the tenants or inhabitants of a parish or manor other than the lord or great landowner.

Now great changes certainly took place in the fifteenth and sixteenth centuries, but the nature of these changes are, I think, misconceived by Sir G. Campbell.

The real alteration appears to have been of a different kind from what he supposes. At a previous time the serfs of "Doomsday Book" had been gradually converted into copyholders, of whom we have many examples at present, or into tenants with the obligation of working on the demesne lands of the lords, and paying low rents in kind or in money.

The reigns of Henry VII and Henry VIII were very important as regarded the ownership and occupation of land in England; the nature of the changes, however, which then took place, have never, so far as I know, been satisfactorily explained. It is certain, however, that the landowners who had previously required the services of large bodies of retainers, then found money more serviceable to them than arms and legs, evicted their cottier tenants, and converted small arable holdings into meadows and pastures; the result was much suffering among the ejected, and the existence of large bodies of houseless wanderers and vagabonds, whose depredations and misery gave ample employment to the legislature and the hangman during the sixteenth century, and had something to do with the celebrated 43rd Act of Elizabeth, which formed the basis of the existing poor law.

This curious episode in English history, which one must regard as being connected with the villeinage of an earlier period, then probably all but extinct, is well worth a thorough investigation, which it has never yet received. At any rate, one may be sure that Sir G. Campbell's picture bears but a scant relation to the reality, and one may affirm that any cruelty or injustice inflicted on the enfranchised villeins of the period referred to can give no support to Sir G. Campbell's notion that in the year 1875 the existing landowners can be regarded as having a limited right to their property.

The labourers and farmers of our day have little relation, unless in name, to those who tilled the soil in the fifteenth and sixteenth centuries, and however cruel might have been the landowners of that time, their crimes cannot justly be avenged on the landowners of ours, who have bought and inherited their estates under laws which conveyed them in full and entire property without the slightest reservation.

It would have been but fair if Sir G. Campbell, who seems disposed to punish the landowners of 1875 for the injustice practised on what he calls the people three hundred and fifty years ago, had given them credit for the extinction of slavery and villeinage during the centuries preceding. This would have been an example of sound logic and political justice on his part, and he must on due consideration regret the omission.

Sir G. Campbell makes some remarks on the law of primogeniture as derived under the feudal system from the necessity which existed of a person being always ready to perform the military service which the sovereign could claim, and upon this point I consider him right, but it does not follow that the vassal ought to be regarded as an office-holder. He was properly the possessor of a fief, with certain duties annexed to it. One does not call a tenant farmer an office-holder because he has a rent to pay. At any rate it is difficult to imagine how the military tenures legally abolished more than two centuries ago, can be considered as any justification for an infringement on the rights of property now.

And here I may remark that in my opinion there exists no sufficient ground for the retention of the law of primogeniture with respect to real property, in the case of a person who dies intestate. It may certainly happen in particular cases that an equal division of the land among the children may be highly inconvenient, unjust, and inexpedient, but at any rate equal division is more likely, as a rule, to conduce to the welfare of the children, and to the general well-being of society, that the eldest son should inherit all and his brothers and sisters nothing.

In case of intestacy, the rules now applicable to personalty should, in my view, be made applicable to realty.

It must, however, be allowed that the change thus advocated could produce but little practical effect. Cases of intestacy are rare, and as a rule every Englishman and Englishwoman who has anything to leave, performs the all-important duty of making a will.

Sir G. Campbell makes many observations on the social and political advantages derived from the existence of a class of peasant proprietors, in some of which I agree with him, as well as in his view, of the causes which have led to their being few in England, "as in the case of a young man who has become possessed of 25 or 30 acres of land, worth 1,500*l* or more, if he sticks to his land, he must continue to be but a poor man in a very small way; if he sells for a good round sum, that will suffice to set him up in business. He may emigrate with great advantage, or he may take a considerable farm in his own country," &c., &c.

In what precedes Sir G. Campbell has rightly explained why it is that so little land in England is occupied by the owners.

It must not, however, be supposed that land in England is exceptionally dear. The truth is rather the reverse. It is cheaper than in France, for instance. The passion for the ownership of land in France arises partly from old habit, for peasant proprietors were common there, as Arthur Young tells us, even before the Revolution, partly from the security the possession of land affords against starvation in a country where revolutions are frequent, and there are no poor laws. Peasant proprietors could hardly continue to exist to so large an extent if exposed to the competition of large holdings occupied by tenants well instructed in agriculture, and with sufficient capital, but this sort of competition is rare in France, and Lavergne tells us—"that the cultivating owners farm better than leaseholders." Upon this one may remark than unless in the production of special products such as poultry, wine, or vegetables, the result of French agriculture is miserable. The crop of wheat is stated by Lavergne thirty years ago to have been on an average only 14 bushels an acre, or about half that of England. The average, if since improved, is at any rate very low. The inferiority of France as respects animals was about equal to that in corn.

Sir G. Campbell expatiates on the want of good dwellings for the working class, and in this I thoroughly agree with him. I differ, however, from him in thinking that much good would arise from the artificial schemes which he suggests as palliatives. The expense involved in the sale of small properties he thinks a great obstacle in the way of procuring sites. To which it may be answered, that in France the sale of small properties is very common, although the expense of transfer is three or four times as great as in England.

I am persuaded that the obstacle which lies at the root of the evil is overlooked by Sir George Campbell, and by almost all the writers and speakers upon the subject, viz., the absence of a strong desire on the part of the working classes for roomy, healthy, and comfortable habitations. A majority of working men place this matter in the very back ground of their wants and aspirations. They desire in the first place to have ample food, and too often an excess of drink. Next a sufficiency of clothing. The lodging is the last thing considered. There are perhaps hundreds of thousands of artisans and manufacturers whose incomes, comprehending of course in many cases the earnings of wives and children, on an average reach 100*l.* per annum. Yet these men in many instances are content to dwell like pigs, with little regard to health or even decency. There is hardly any other class in whose expenditure rent enters for so small a proportion.

That which is wanted in the first place is then to spread abroad a sense of decency and self-respect upon this point. If an artisan felt it to be his duty to begin to save early in life with a view to provide himself with a healthy and commodious dwelling before he contracted marriage, and if the parents of his sweetheart and the girl herself considered this to be a necessary preliminary to matrimony, the object would be half accomplished. There are few towns or even villages in the kingdom where many houses are not to be found belonging to little capitalists. In truth cottage building is a favourite employment for the savings of the prosperous and rising tradesman. Why should not artisans anticipate such persons? If they only make a beginning, they can offer security on which they may borrow at the moment, supposing that their own savings do not suffice. Moreover, if a good dwelling were considered a necessary, unattainable at the present rate of wages—wages would rise.

I am happy to say that in the district where I reside, many working men have acted in the way thus pointed out, and are now owners of the houses in which they live and sometimes of others. In some cases they have been aided by building societies, but these societies too often buy their land at unnecessary cost, and allow lawyers and surveyors to prey upon them and their customers.

If it be said that there are large tracts of country forming the estates of great landowners where sites cannot be purchased, I reply that these are exactly the districts in which new and improved houses are least required. The cottages on such properties are usually sufficient in number and of superior quality.

Sir G. Campbell says a good deal as to the evil effects of entails and settlements in which I cannot wholly agree. Upon the first point it may be remarked than an English entail does not on an average exist for more than thirty years, and that the greater part of England, including some of the largest estates, is not entailed at all. Again, an equivalent of entails as respects personalty would, I think, appear if the books of the Bank of England, and those of other great companies, were carefully examined. In that case, however, a power of disposition and of transfer is always placed in the hands of trustees, rarely less than two, usually more numerous, and I think it might be a subject of fair discussion if it would not be advisable to fix the title to land also in the hands of trustees, but there should never be less than two to possess the power of conveyance, or we might expect a plentiful crop of frauds. The consent of trustees would of course protect any *bona fide* purchaser or mortgagee.

I regard, however, the French law of equal division as very pernicious. At any rate there should be but little if any limitation to the power of bequest.

Remarks have been already made upon Sir G. Campbell's notion that the ownership of land is of a limited character, and this he follows up by suggesting that there would be no injustice in the imposition of special taxes on land; but surely this would be the height of injustice.

Sir G. Campbell does not seem to be aware that a special tax on land would fall exclusively on the actual owner at the time of its imposition, unless as it affected the right of a remainder man.

It would diminish proportionally the selling value of the land. Suppose a tax of 20 per cent. on the rent, and that the average price of land was thirty years' purchase, the price would necessarily fall at least to twenty-four years' purchase on the gross rent. It would fall actually more: firstly, because the gross rent always exceeds the net rent; secondly, because so flagrant an act of injustice would shake confidence in the morality of the Legislature. People would say, if 20 per cent. now, why not 40 per cent. in a few years hence? At any rate, it would not be felt by subsequent purchasers. Let us suppose that two persons, whom we will call A and B, had each laid out 10,000*l.* during the summer, A in land, B in consols, what would be said of a law, passed in the next session, which should impose a tax of 20 per cent. on A and nothing on B?

Here a few remarks may be made upon a matter which does not appear to have excited the special attention of Sir G. Campbell. It is the difficulty of obtaining freehold land for building near our great cities—London, for example—or of purchasing freehold houses. On this last subject much might be written, and I will only make a few remarks.

It is said that our new houses erected by speculative builders are of bad quality, and that owners would build better. This may be granted. On the other hand, such houses usually built on leased ground are far cheaper, and the vast majority of the inhabitants of a large city could not afford to live in houses of their own. It might even be argued, that a house which endures for fifty or sixty years lasts long enough; that a new house admits of improvement in arrangement, &c., and that the improvements could not be added to an old house. Anybody who may have bought or inherited, either in town or country, houses of more than say fifty years' duration will feel that they are usually very inconvenient and unprovided with the appliances required by the tastes and habits of modern life. A French economist remarks that one of the causes of deficiency and failure in French manufactures is that they begin by building too ambitiously, and thus misapply a large portion of their capital, while their English rivals build slightly at first, and then improve or renew, and this is by far the cheaper plan.

Few can doubt that Belgravia and other parts of the Metropolis have gained greatly in health, beauty, and convenience from being the exclusive property of wealthy owners. The question has in fact many sides to it, and the best opinion that could be formed upon it would perhaps be, that the opportunity of purchasing land, with the object of building a house for residence, is desirable on public grounds, yet that it would be a misfortune, if there were not some large landowners who let their land with certain stipulations on the part of the original lessees (who would of course be speculators) as to the direction of the streets, &c.

If a large number of persons were desirous of erecting houses for themselves on freehold sites, there can be little doubt but that their wishes would be gratified. They would of course have to pay dearly for the land, and their houses when built would be very costly. On the whole I am of opinion that the existing system under which the owner and occupier are different persons is usually the most convenient. There seems to be no sufficient reason why the leaseholder of a house should not before he enters upon his bargain ascertain that the house is well and substantially built, but if he insist upon this he must pay for the gratification of his taste, and he usually looks to price rather than to quality.

And now for another subject on which Sir G. Campbell dilates with much energy. Tenant rights are demanded on two grounds: justice to tenants, and the probability of maintaining a better system of agriculture and augmenting thereby the produce of the soil. On the whole subject one may make a preliminary remark, viz., that the existing system of land occupation in England has arisen in the natural course of things, and that it cannot be very bad, inasmuch as all things considered, England is the best cultivated country in Europe. Now the leading peculiarity of the English system is tenancy held on free contract, and owing to this circumstance, more capital and a larger amount of intelligence are applied to the business of agriculture than in most continental countries. The actual cultivator is not obliged to sink three-fourths of his capital in the purchase of soil, which yields a very low rate of profit. He has consequently a larger amount of circulating capital to dispose of, and is thus enabled to farm on a sufficient scale to be able to employ the best implements, and to raise and fatten the largest number of animals of improved races, and thus gradually to add permanently to the fertility of the soil.

That the above fact lies at the bottom of the superiority of English agriculture, is rendered probable by foreign examples. Thus the Pays de Waes in Flanders, the valley of the Po in Lombardy, and the valleys of the Arno and Chiana in Tuscany, districts renowned for their productiveness, are generally in the hands of tenants.

Although English agriculture is excellent compared with that of most foreign countries, it might no doubt be greatly improved, and it will be improved as cultivators acquire more capital and intelligence, but I doubt if the enlargement of tenant rights would greatly conduce to this desirable end. Tenants would not usually, as is assumed, go on with an undiminished outlay to the end of a lease or an agreement. They would still, as now, during the latter years of the tenancy, strive to take out some of the capital they had previously put in, but not a few, especially among the least scrupulous, would strive while doing this to bring in a long bill for unexhausted improvements, against the incomer or landlord, nor would this be difficult. The item of artificial manure may be pointed out as especially lending itself to deception, and others might be named. Mr. Read, one of the most intelligent advocates for tenant right, allows, that if tenants are to be paid for improvements, they should be made liable for dilapidations.

The writer is, however, of opinion that landlords would derive but little advantage from any such enactment; it would be troublesome and almost nugatory, if it went farther than the clear and simple penalties involved in the violation of existing leases and agreements. In short, the claim for unexhausted improvements would certainly lead to endless disputes and difficulties, and would foster roguery, while tending but little to improve the system of farming.

The relation between landlord and tenant in England is based upon contract, supplemented in each district by its custom, and it is far best for all parties that this state of things should continue. The farmers, as a body, are too wealthy, powerful, and intelligent to require any special protection like factory children.

Let them only insist upon such terms of contract as they may think desirable for their own interest. Should a landlord resist, there would be a higgling in the markets, and the disputants would finally agree as to the conditions of a bargain. The suggestion made by some unreasoning advocates, that existing leases and agreements should be interfered with for the benefit of the tenant, would be an act of supreme injustice.

Comments have been made on a few of Sir G. Campbell's opinions and arguments with more regard for them than for the summary of the Acts of legislation which he considers desirable, and with which his paper concludes. He observes that these are far more conservative than one should have expected from what precedes them. In truth, he somewhat resembles those specimens of the month of March, which are said to come in like a lion and to go out like a lamb. Since this paper was written, an Agricultural Holdings Bill has become law; of this I can only say that I expect from it no good, and but little harm.

I will conclude this paper as I commenced it, by an expression of my unfeigned respect for Sir G. Campbell. This has been, if possible, enhanced by a recent perusal of his admirable essay on the land tenures of India, contained in the publications of the Cobden Club. The economical errors, if any, of so distinguished a person are likely to produce especial mischief, and that in proportion to the high authority from which they have emanated.

II.—*The Climate, Agriculture, Commerce, &c., of Egypt.*

The work published at Cairo by the Minister of the Interior, called *Statistique de l'Egypte*, and the reports of the British Consuls, furnish an ample store of information, from whence it is possible to glean many facts of interest and importance with regard to the agriculture, commerce, and industrial resources of that country. It appears that during the ten years ended in December, 1871, the population had increased by 494,300, showing an annual average increase of 49,340, as against an annual increase of 33,500 in the preceding ten years, and this notwithstanding the severe epidemic of cholera in 1865, which alone carried off 61,189 persons. The population of Egypt being in December, 1871, 5,250,000, as against 4,755,700 in December, 1861, an increase is shown of 0·94 per 100 inhabitants, but if only the preceding five years be considered, when the annual increase of the population was 63,296, this would show an increase of 1·20 per 100, one inferior to few European countries. The annual average of deaths in the whole country, from 1867 to 1871, was 138,580, showing a death-rate of 2·64 per cent. In Cairo, with an estimated population of 349,883, the rate was 4·66 per cent. In Alexandria, with a population of 212,034, the rate was 4·09 per cent. At Cairo, which by repute possesses a healthy climate, a clear and pure air, comparative statistics prove that the death-rate is higher than in any capital in Europe, whilst the rate throughout Egypt compares favourably with many European countries. This is accounted for partly by the number of natives, who, from all parts of the country, from motives of religion amongst others, go to die at Cairo, and partly by the cold of winter being fatal to the ill-clad natives of Nubia and Soudan who reside there in great numbers. At Alexandria, until the drainage is altered, fevers are, and will, it is feared, continue to be, the most fatal disease.

It might have been expected that the great number of trees planted by Mahomed Ali (upwards of 3,000,000 ft.), and the constantly increasing area of the canals would have caused a notable increase of the rainfall. Meteorological observations, however, taken at the time of the French occupation of Egypt, and those taken more recently, show that there has been no sensible increase. Thus the number of days in which rain fell from 1798 to 1800, was, on an average, fifteen yearly; from 1835 to 1839 the average was twelve yearly, during which time the amount which fell was reduced from 0·69 in. in 1835, and 0·83 in. in 1836, to 0·60 in., 0·44 in., and 0·12 in. in 1839. In 1871, the number of rainy days at Cairo was nine, during which the total duration of the rain was 9 hours 8 minutes. These observations are for Cairo, but so far as they relate to the increase of rain, apply also, relatively, to all the Delta; thus at Alexandria, where the country around was a mere desert till the completion of the Mahmoudieh Canal, and which has, during the last twenty years, been very largely planted, there has been no appreciable increase, the amount which fell having been, in 1867 8·92 in., in 1868, 13·18 in., in 1869, 6·22 in., in 1870, 2·86 in. in 1871, 6·61 in., and in 1872, 11·14 in., while the mean for the three years 1847-49, was 7·50 in. The Suez Canal, Consul Stanley believes, has somewhat modified the climate of that portion of the isthmus through which it passes, rendering it cooler in summer and warmer in winter. The average monthly temperature in 1873 was as under:—

	ALEXANDRIA. — Degrees Fahrenheit.	CAIRO. — Degrees Fahrenheit.
January	59	54
February	59	54
March	63	63
April	66	68
May	72	80
June	75	84
July	77	85
August	78	86
September	76	82
October	74	73
November	69	66
December	61	59
Average	$69\frac{1}{12}$	$71\frac{2}{12}$

The most oppressive and unhealthy period in the year is from the middle of September to the middle of October, when light easterly winds prevail, causing a damp, muggy heat. At Cairo the thermometer occasionally falls to freezing point, and few houses being provided with fireplaces, a very moderate degree of cold is much felt. Invalids are, therefore, often grievously disappointed in Lower Egypt, as a winter residence, and suffer much from the cold. Invalids wanting warmth should repair to the Saïd and Nubia. At Thebes, from November to February, they will find a perfect climate, hot and dry, but not enervating. They should then go to Cairo, and remain till April, unless they find the hot winds too enervating, when they might remove to Alexandria, where the climate is pleasant till the middle of June.

The surface of Egypt capable of being cultivated is, according to official statistics, 7,264,640 acres, or 11,351 square miles, of which about 4,795,000 acres are actually under cultivation. The figures, therefore, given as to the population, show that there is no want of hands for its proper cultivation, there being for the whole 11,351 square miles, 462 inhabitants per square mile. Whereas, in England, and exclusive of Wales, Scotland, and Ireland, there are 422; in Belgium, 434, and in France, 231. In Egypt, too, almost the whole population is available for agricultural purposes, there being scarcely any manufactures. Steam, moreover, is now used for irrigation by all the large landowners, though the small cultivators have still a most primitive method of irrigation, similar to that in Bengal, using, where oxen and camels are not employed turning the wheels, leaky baskets, which keep two men constantly employed raising the water into a channel whence it flows in rills over the land. There is certainly a large margin for the substitution of mechanical for manual labour; steam power may be too costly for the poorer holders, but the syphon system or windmills might be employed to advantage. The great desideratum is to keep the canals filled whence irrigation is easy. This, and the digging of fresh canals, form the labour of the people for months. The country depends so absolutely for its agricultural prosperity, even for the existence of the people, on the maintenance of the canals at a certain level, that no reason exists why the people should not be compelled, under wise and proper direction, to contribute their labour to this end.

It is difficult to arrive at the real truth as to the excessive taxation, said to weigh on the agricultural population of Egypt. There is no doubt that the people themselves complain of excessive taxation, but this is a complaint common to the agriculturists of many countries. Published statistics show that the land tax averages slightly over 1*l.* per acre on the whole ground cultivated; but this tax comprises all that are paid by the agriculturist, and in no case falls directly on the peasant. There are three systems under which the land is cultivated; and under the two latter, invariably, and generally under the first, each labourer has a portion of ground allotted to him at a low rent, which he can cultivate as he chooses. The systems are as follows:—

1. The owner cultivates his ground by hired labour generally, so as to ensure a certain supply of labour, letting at a low rate to each head of a family from one to four acres of ground, according to the size of the family. The average wage is 8*d.* per day, and bread or biscuits.

2. The owner arranges with the peasantry on the estate to work at his own cost, they giving him their labour, for which they become entitled to a share of the profits, generally from one-fourth to one-third. The land required for the maintenance of the cattle on these estates is not included in the labourers' share of profit.

3. The owner lets his land to the peasants, who work at their own expense under his general supervision, but instead of paying a fixed rental, they equally share with him in the profits.

Should the estate be near a market for the produce, they are content with less than half the profits.

In all cases the owner pays the taxes, and is the only person recognised by the Government.

Since 1872, a system of compounding for taxes has been introduced, Government having invited the landowners to pay, in six years, the taxes for twelve years. To those who accept this proposition, and it is considered by the Egyptian landowners as a command, half the present tax is for ever remitted on their having made six double payments; nor will the tax be subject to future variations. Thus the owner of land paying 100*l.* a-year, will, should he pay 1,200*l.* in six years, receive a title by which he will hold his land for ever, subject to the payment of 50*l.* annually. This measure was estimated to produce 1,600,000*l.* for twelve years, and forms the security for what are known as Mokabla Bonds.

The principal crops, number of trees growing, the animals used in agriculture, and the poultry are stated as follows in the *Statisque de l'Egypte.*

(These figures are exclusive of the province of Gizeh, and so far as can be ascertained, do not, with the exception of sugar, include the Daira, or private estate of the Khedive).

Wheat	ardebs	3,040,455
Barley	,,	2,156,040
Maize and dourra	,,	2,646,207
Beans	,,	1,849,259
Peas	,,	31,395
Lentils	,,	207,064
Rice	,,	88,537
Helbeh	,,	323,306
Trefoil	,,	175,732
Garden produce	piastres	5,799,786
Vegetables	,,	6,785,700
Melons	,,	644,400
Tobacco	quintaux	19,421
,,	piastres	109,500
Cotton	feddans	718,997
Sugar-cane	,,	35,784
,, (Daira)	,,	54,938

Note.—Equivalents: 1 piastre = 2½*d.*; 1 feddan = 1·1019 acres; 1 ardeb = 5 imperial bushels; 1 cantar = 44·47 kilogs.

Number of Trees Growing.

	No.
Acacia	280,468
Apricots	140,540
Bananas	137,112
Citrons	368,626
Figs	633,713
Mulberry	172,280
Orange	497,944
Date	3,429,498
Peach	79,973
Raisin	202,748
Rose	155,390
Tamarind	234,478
Vine	221,560

Animals used in Agriculture.

	No.
Cattle	126,989
Sheep	172,657
Goats	23,907
Buffaloes	165,111
Horses	18,203
Mules	2,105
Asses	94,641
Camels	35,578

Poultry.

	No.
Fowls	6,101,200
Pigeons	4,057,300

Of late years the Viceroy has directed his attention to the cultivation of the sugar cane, and to the establishment of sugar factories furnished with machinery on the most approved principles for pressing, dessicating, crystallizing, and refining the sugar. It is in Upper Egypt that this cultivation is carried on, and the factories are built on the plantations, as near as possible to the banks of the Nile. The sugar season lasts about three months. A very large number of camels are employed in transporting the cane from the fields to the mills, and in some places tramways have been laid down for facilitating the transport of the cane to the mills. It is said that a larger number of smaller mills, judiciously distributed about the plantations, would be more profitable to the Viceroy, as in that case each factory would use the cane in a limited area, which would be more easily, more expeditiously, and consequently, more economically conveyed. There are no sugar factories in the hands of private individuals, but there are a few small presses for making treacle. Upwards of 100,000 feddans, one feddan being about an equivalent for an acre, are devoted to the cultivation of sugar. In the year 1872 the Viceroy's daira exported upwards of 2,000,000 cantars of sugar.

There is no doubt that by a better system of farming, especially by attention to a proper rotation of crops, the produce of all kinds would be largely increased. Were Europeans with capital welcomed, the revenue also would improve, but so long as every foreigner is regarded with jealousy and suspicion, meeting with obstructions from corrupt officials till he is weary or ruined, there can be no hope that Europeans with capital will settle in the country. Some time ago the Khedive divided the greater portion of his land among his sons and various members of his family, so that there are now at least six dairas or separate administrations, all working nominally independently, but in reality under the control of one central bureau, the Khedive's, called the Daira Saina. This step has, if not productive of any great improvement, at least served to test the capacity of certain individuals, and the Khedive's second son, Hussein Pasha, has especially distinguished himself by the intelligence with which he manages the properties allotted to him. Consul Stanley states that information leads him to the conclusion that the Khedive would find more profit in letting all his lands and factories, or nearly all, reserving sufficient for model farms. All great cultivators are robbed, and it seems impossible, so long as public feeling does not disapprove of peculation, to stop the robberies of their employers by overseers, and the oppression of the villagers under them. It is notorious that every post of authority in the villages is paid for, notwithstanding the miserable stipend attached to the post, as affording an opportunity for plundering.

The volume of the *Statisque* institutes comparison between the commerce at two decennial periods. The total value of the exports from Egypt from 1863 to 1872 was 12,024,358,944 piastres, being an annual average of 1,202,435,894 piastres, or 300 million frs.; from 1853 to 1862 these amounted to 2,671,782,727 piastres, an average of 267,178,272 piastres, or 65 million frs. The decennial period 1863-72 presents a fivefold increase in the aggregate value of merchandise exported, which increase of itself would appear considerable, but is still more striking when compared with analogous operations in other countries. The exports of French home produce, for example, nothwithstanding the energetic impulse given to the commerce of that country in recent times, has only doubled in twelve years: from having reached 1,442 millions in 1855, it attained to 2,825 millions in 1867. The actual exports of Egypt (300 million frs. upon an average) tend continually to augment, the proof of which may be seen in the export of 350 millions in 1872: the development of its agriculture, its industries and its resources, with the ever-increasing quantities of cotton, sugar, and other merchandise that it showers upon Europe, serve to sustain the maximum point reached in 1864-65 during the cotton dearth. Compared with the population these exports represent 57 frs. per head, a proportion not always reached by countries where even the exports surpass those of Egypt in amount.

The bulk of the commerce carried on with Europe is from Alexandria, the largest proportion being with England, then France, whilst the remainder is divided between other countries in the following order:—Austria-Hungary, Italy, Turkey in Europe and Asia, Syria, Russia, Barbary, Belgium, Greece, &c. In 1873, at the port of Alexandria the total value of imports was 6,000,000*l.*, of which England contributed 2,700,000*l.* The chief articles exported were cotton, sugar, and the cereals. The cotton exported in 1873 reached the high figure of 2,389,541 cantars, equivalent to 2,161,648 cwts. or 398,258 bales. The success that has hitherto attended the cultivation of cotton has shown beyond doubt that Egypt can compete upon equal terms with the finest cotton produced in America. The building in which the sales are carried on is of recent construction, and there are few cities in Europe that can lay claim to the possession of a more commodious produce Bourse. The cultivation of sugar upon any extended scale is of recent date, yet owing to the soil and climate being well adapted to it, and to the Khedive having largely interested himself in it, it figures now among the chief items. In 1867 the exports were 5,500 cwts., and in 1873 884,000 cwts. The article of cotton seed is becoming one of the principal articles of export. It has gradually risen from 1,000 cwts. in 1869 to 3,490,000 cwts. in 1873, of the value of 770,000*l.* England takes nearly all this. The records of the shipping show that in 1873 2,736 vessels, of 1,501,181 tons burden, entered the port of Alexandria; of these 700 were English, and of the remainder the largest numbers were Greek and Turkish, although these were mostly of very small burden, not above 100 tons each.

In Egypt education is still backward and limited; thus the number of those attending primary schools is 90,000, which in a population of 5,250,000 represents a proportion of 17 per 1,000, a proportion less than in any European country except Russia. It must, however, be remembered, that prejudices difficult to overcome exist amongst the Mahommedans as to the education of females. These prejudices the Khedive is attempting to combat, and has established a large girls' school at Cairo, where, besides an elementary education, sewing, washing, and dressmaking are taught. He is also organising similar establishments. When they have been longer in operation, it will be most interesting to note the success which it is to be hoped will attend these endeavours, the first in any Mahommedan country, to promote female education, and to raise the intellectual and moral status of future generations of Egyptians.

III.—*Lloyd's Statistics of Marine Losses in* 1874.

THROUGH the continued courtesy of the Committee and Secretary of Lloyd's, we are enabled to give the annexed statistics of casualties at sea, reported to that Corporation during the year 1874, with their results, so far as ascertained.

The figures for the years 1872 and 1873 were published in the *Journals of the Statistical Society*, vol. xxxvii, part 4, December, 1874, and vol. xxxviii, part 1, March, 1875, respectively.

It is interesting to note the comparatively close approximation in the percentages of various casualties year after year, with only the somewhat crude bases of comparison available, and the following short digest may enable our readers more easily to appreciate some of the points brought out by the records of the three years which have now been successively published in our *Journals.*

Lives Lost.—The reports to Lloyd's are as yet very imperfect; it is, however, satisfactory that, so far as they go, they show a considerable diminution in 1874. The numbers were:—

	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Annual Number.
Lives lost so far as reported 1872	280	370	232	648	1,530
'73	467	699	164	645	1,975
'74	413	500	219	352	1,484
Total for three years	1,160	1,569	615	1,645	4,989
Annual average	387	523	205	548	1,663
Percentage on annual total........	23·25	31·45	12·33	32·97	100·00

Crews Saved and Drowned.—The same imperfection attaches to the reports relating to crews saved and drowned, although not to so great an extent; the following analysis may be of interest:—

Sailing Vessels.	Crews Saved.					Crews Drowned.				
	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Annual Total.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Annual Total.
1872	280	204	156	558	1,198	22	24	18	46	110
'73	378	144	172	312	1,006	64	66	31	46	207
'74	247	190	140	398	975	39	55	39	34	167
Total for three years	905	538	468	1,268	3,179	125	145	88	126	484
Annual average	302	179	156	423	1,060	42	48	29	42	161
Percentage on annual total	28·47	16·92	14·72	39·89	100·00	25·83	29·96	18·18	26·03	100·00

Steamers.	Crews Saved.					Crews Drowned.				
	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Annual Total.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Annual Total.
1872	21	25	21	33	100	5	1	—	7	13
'73	26	9	18	18	71	14	1	—	1	16
'74	26	20	19	30	95	6	7	2	3	18
Total for three years	73	54	58	81	266	25	9	2	11	47
Annual average	24	18	19	27	89	8	3	1	4	16
Percentage on annual total	27·44	20·30	21·81	30·45	100·00	53·19	19·15	4·26	23·40	100·00

From the *Universal Mercantile List,* issued by the Bureau Veritas, it appears that in 1870 there were 59,518 *sea-going sailing vessels* belonging to the mercantile navies of the world—this was the first issue of the useful publication referred to—and up to 1873 no other volume had been printed. Accepting this as an *approximate* basis of comparison, we find that in 1872 20·51 per cent. of the whole number had casualties reported to Lloyd's; while as to *steamers* the number of *sea-going* vessels in 1870 was given in the same book as 4,132, of which it would seem that 55·32 per cent. had casualties reported to Lloyd's in 1872.

In 1873 the second issue of this work appeared, and the number of *sea-going sailing vessels* was given as 56,281 of which 19·77 per cent. were reported with casualty; while the *sea-going steamers* numbered 5,148, of which 47·55 per cent. were reported in that year under casualty.

The year 1874 shows a slight diminution in the percentage of casualty to numbers, as follows: *sea-going sailing vessels* numbered 56,289, and the casualties reported to Lloyd's were 19·73 per cent. thereon; *sea-going steamers* were given as 5,365, and casualties to them amounted to 46·97 per cent.

On the average of the three years, 1872-74 inclusive, *sailing vessels* gave 20·01 per cent. of casualty; and *steamers* 49·53 per cent.

Of the casualties reported, the proportions of the more serious were as under:—

	Sailing Vessels.				Steamers.			
	Percentage on Annual Total.				Percentage on Annual Total.			
	1872.	1873.	1874.	Three Years' Average.	1872.	1873.	1874.	Three Years' Average.
In collision	16·15	18.85	16·91	17·27	28·65	30·43	27·06	28·70
Stranded	25·68	26.06	25·39	25·72	25·50	24·51	25·60	25·20
Leaky	11·52	11·95	10·97	11·48	2·15	2·45	2·74	2·45
Other casualties	46·65	43·14	46·73	45·53	43·70	42·61	44·60	43·65
	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00

The percentages of the *results* to the vessels reported, so far as ascertained were as under:—

	Sailing Vessels.				Steamers.			
	Percentage on Annual Total.				Percentage on Annual Total.			
	1872.	1873.	1874.	Three Years' Average.	1872.	1873.	1874.	Three Years' Average.
Total or constructive loss or great damage	28·09	30·99	29·59	29·51	14·08	15·28	16·26	15·21
Minor damage	53·15	50·15	51·68	51·71	50·14	47·64	48·99	48·91
Not damaged or results unknown	18·76	18·86	18·73	18·78	35·78	37·08	34·75	35·88
	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00

I.—*A Table showing the Number of Wrecks and Casualties to Sailing Vessels and Steamers*
Compared with the Average Number and

Sailing Vessels.	First Half-Year.				Second Half-Year.				Annual Total.			
	1874.		Average Eight previous Years.		1874.		Average Eight previous Years.		1874.		Average Eight previous Years.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1. *Missing* …………	58	1·19	62	1·24	53	0·85	30	0·52	111	1·00	93	0·86
2. *Abandoned*—												
Recovered ….	34	0·70	33	0·66	38	0·61	39	0·68	72	0·65	72	0·67
Lost ………………	120	2·47	128	2·55	134	2·15	133	2·30	254	2·29	261	2·41
Total …………	154	3·17	161	3·21	172	2·76	172	2·98	326	2·94	333	3·08
3. *Collision*—												
Not damaged	231	4·75	215	4·29	251	4·07	264	4·58	485	4·37	479	4·44
Damaged……..	552	11·35	551	10·97	701	11·24	621	10·74	1,253	11·28	1,172	10·85
Sunk …………	61	1·25	76	1·52	78	1·25	81	1·40	139	1·25	157	1·45
Total …………	844	17·35	842	16·76	1,033	16·56	966	16·72	1,877	16·90	1,808	16·74
4. Sinking from causes other than collision …………	130	2·67	169	3·36	132	2·12	190	3·28	262	2·36	358	3·32
5. *Stranded*—												
Got off …………	734	15·09	696	13·86	829	13·29	742	12·84	1,563	14·08	1,438	13·31
Not got off ….	495	10·17	514	10·22	597	9·57	691	11·97	1,092	9·83	1,205	11·16
Subsequent fate not reported	55	1·13	145	2·89	110	1·76	190	3·29	165	1·49	335	3·10
Total …………	1,284	26·39	1,355	26·97	1,536	24·62	1,623	28·10	2,820	25·40	2,978	27·57
6. Capture …………	—	—	5	0·11	—	—	12	0·21	—	—	17	0·16
7. Piracy………………	—	—	2	0·04	—	—	3	0·05	—	—	5	0·04
8. Burnt or on fire	70	1·44	69	1·37	101	1·62	80	1·39	171	1·54	149	1·38
9. Dismasted or disabled……..	193	3·97	186	3·70	290	4·65	292	5·05	483	4·35	478	4·42
10. Jettison of cargo under deck …………	79	1·62	93	1·85	92	1·47	89	1·54	171	1·54	182	1·69
11. Jettison of deck-load or washed overboard ……	71	1·46	58	1·15	200	3·21	101	1·74	271	2·44	158	1·47
12. Leaky……………..	505	10·38	536	10·66	713	11·43	654	11·31	1,218	10·97	1,189	11·01
13. Loss of anchor or chains ….	169	3·47	249	4·96	286	4·38	265	4·59	455	4·10	515	4·76
14. Machinery damaged, &c.	—	—	—	—	—	—	—	—	—	—	—	—
15. Mutiny, sickness, casualties to crew, or refusing duty ………	101	2·08	130	2·60	125	2·00	119	2·06	226	2·03	250	2·31
16. Ship dmged., &c.	1,197	24·61	1,095	21·80	1,484	23·79	1,164	20·15	2,681	24·15	2,259	20·92
17. Water-logged….	10	0·20	11	0·22	21	0·34	18	0·31	31	0·28	29	0·27
Number of casualts.	4,865	—	5,023	—	6,238	—	5,779	—	11,103	—	10,802	—
Number of vessels	4,588	—	4,650	—	5,841	—	5,397	—	10,429	—	10,048	—

reported in "Lloyd's List" during the Year 1874, *and the respective Percentages thereon, Percentages for the Eight Previous Years.*

First Half-Year.				Second Half-Year.				Annual Total.				Steamers.
1874.		Average Eight previous Years.		1874.		Average Eight previous Years.		1874.		Average Eight previous Years.		
Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	
13	1·13	5	0·75	4	0·29	2	0·26	17	0·67	8	0·48	1. *Missing*
												2. *Abandoned*—
1	0·09	1	0·10	—	—	—	—	1	0·04	1	0·09	Recovered
3	0·26	2	0·28	—	—	2	0·23	3	0·12	4	0·24	Lost
4	0·35	3	0·38	—	—	2	0·29	4	0·16	5	0·33	Total
												3. *Collision*—
152	13·22	114	15·93	182	13·28	154	18·02	334	13·25	268	17·06	Not damaged
138	12·00	91	12·60	182	13·28	116	13·51	320	12·70	206	13·10	Damaged
12	1·04	9	1·31	16	1·17	14	1·68	28	1·11	24	1·51	Sunk
302	26·26	214	29·84	380	27·74	284	33·21	682	27·06	498	31·67	Total
29	2·52	19	2·66	34	2·48	24	2·75	63	2·50	43	2·71	4. Sinking from causes other than collision
												5. *Stranded*—
252	21·91	139	19·37	275	20·07	172	20·12	527	20·91	311	19·78	Got off
45	3·92	29	4·04	54	3·94	41	4·78	99	3·93	70	4·44	Not got off
6	0·52	14	1·93	13	0·95	9	1·08	19	0·75	23	1·47	Subsequent fate not reported
303	26·35	182	25·34	342	24·96	222	25·98	645	25·59	404	25·69	Total
—	—	1	0·09	1	0·07	1	0·13	1	0·04	2	0·11	6. Capture
—	—	—	—	—	—	—	—	—	—	—	—	7. Piracy
27	2·35	20	2·84	30	2·19	22	2·53	57	2·26	42	2·67	8. Burnt or on fire
10	0·87	7	0·90	20	1·46	10	1·21	30	1·19	17	1·07	9. Dismasted or disabled
20	1·74	10	1·39	22	1·61	9	1·10	42	1·67	19	1·23	10. Jettison of cargo under deck
2	0·17	6	0·89	13	0·95	9	1·05	15	0·60	15	0·98	11. Jettison of deckload or washed overboard
27	2·35	21	2·85	42	3·07	20	2·30	69	2·74	40	2·55	12. Leaky
9	0·78	9	1·31	14	1·02	7	0·85	23	0·91	17	1·07	13. Loss of anchors or chains
256	22·26	146	20·26	276	20·15	162	18·94	532	21·11	307	19·54	14. Machinery damaged or short of coals
17	1·48	9	1·32	8	0·58	10	1·19	25	0·99	20	1·25	15. Mutiny, sickness, casualties to crew, or refusing duty
131	11·39	66	9·16	184	13·43	70	8·20	315	12·50	136	8·64	16. Ship dmgd., &c.
—	—	—	—	—	—	—	—	—	—	—	—	17. Water-logged
1,150	—	718	—	1,370	—	855	—	2,520	—	1,573	—	Number of casualties
1,112	—	690	—	1,323	—	828	—	2,435	—	1,518	—	Number of steamers

II.—*A Table showing the Results of Wrecks and Casualties to Ship and Cargo, with Salvage during the Year* 1874, *and the respective Percentages thereon, compared*

Sailing Vessels.	First Half-Year.				Second Half-Year.				Annual Total.			
	1874.		Average Eight previous Years.		1874.		Average Eight previous Years.		1874.		Average Eight previous Years.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Results to Ship—												
Total loss	824	17·96	914	19·66	976	16·71	1,112	20·60	1,800	17·26	2,026	20·17
Constructive loss	99	2·16	95	2·05	81	1·39	86	1·63	180	1·73	183	1·82
Great damage.........	508	11·07	482	10·37	598	10·24	656	12·15	1,106	10·60	1,138	11·33
Minor damage	2,249	49·02	2,160	46·45	3,091	52·92	2,366	43·83	5,340	51·20	4,526	45·04
Raised after sinking....................	26	0·57	18	0·37	24	0·41	13	0·25	50	0·48	31	0·31
Not damaged or results unknown	882	19·22	981	21·09	1,071	18·33	1,163	21·54	1,953	18·73	2,144	21·33
Total	4,588	—	4,650	—	5,841	—	5,397	—	10,429	—	10,048	—
Results to Cargo so far as reported—												
All lost	512	11·16	530	11·40	459	7·86	565	10·47	971	9·31	1,095	10·90
Part lost	245	5·34	257	5·53	389	6·66	283	5·25	634	6·08	539	5·36
All saved................	27	0·59	20	0·43	13	0·22	16	0·30	40	0·38	36	0·36
Forwarded	4	0·09	16	0·34	12	0·21	8	0·15	16	0·15	24	0·24
Heated	18	0·39	10	0·21	7	0·12	9	0·17	25	0·24	19	0·19
Shifted	58	1·26	69	1·48	69	1·18	69	1·28	127	1·22	138	1·62
Otherwise damaged	64	1·39	71	1·52	80	1·37	66	1·22	144	1·38	136	1·36
Salvage Services	302	6·58	479	10·31	392	6·71	504	9·34	694	6·65	984	9·78
Lives—												
Crews saved	437	9·52	427	9·19	538	9·21	504	9·34	975	9·35	931	9·27
Crews drowned	94	2·05	39	0·85	73	1·25	38	0·70	167	1·60	77	0·77
Lives lost so far as reported (in both ships and steamers)	913	—	875	—	571	—	844	—	1,484	—	1,719	—

Services, Crews Saved or Drowned and Lives Lost, so far as reported in "Lloyd's List," with the Average Number and Percentages for the Eight Previous Years.

First Half-Year.				Second Half-Year.				Annual Total.				Steamers.
1874.		Average Eight previous Years.		1874.		Average Eight previous Years.		1874.		Average Eight previous Years.		
Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	
												Results to Ship—
94	8·45	61	8·80	94	7·10	80	9·61	188	7·72	140	9·25	Total loss
6	0·54	5	0·76	6	0·45	4	0·45	12	0·49	9	0·59	Constructive loss
92	8·28	52	7·57	104	7·86	71	8·54	196	8·05	123	8·10	Great damage
525	47·21	284	41·14	650	49·13	315	38·05	1,175	48·25	599	39·45	Minor damage
8	0·72	6	0·80	10	0·76	7	0·86	18	0·74	13	0·83	Raised after sinking
387	34·80	282	40·93	459	34·69	352	42·49	846	34·74	634	41·78	Not damaged or results unknown
1,112	—	690	—	1,323	—	828	—	2,435	—	1,518	—	Total
												Results to Cargo so far as reported—
41	3·69	25	3·61	42	3·17	29	3·46	83	3·41	53	3·52	All lost
43	3·87	28	4·11	61	4·61	33	3·94	104	4·27	61	4·02	Part lost
1	0·09	1	0·20	1	0·08	1	0·12	2	0·08	2	0·16	All saved
—	—	1	0·18	—	—	1	0·11	—	—	2	0·13	Forwarded
1	0·09	—	—	1	0·08	1	0·09	2	0·08	1	0·09	Heated
22	1·98	7	0·98	20	1·51	11	1·33	42	1·72	18	1·17	Shifted
19	1·71	14	2·07	39	2·95	17	2·08	58	2·38	31	2·07	Otherwise damaged
80	7·19	56	8·17	66	4·99	63	7·35	146	6·00	119	7·95	*Salvage Services*
												Lives—
46	4·14	26	3·84	49	3·70	25	2·98	95	3·90	53	3·48	Crews saved
13	1·17	3	0·43	5	0·38	1	0·14	18	0·74	4	0·27	Crews drowned
See	Sail	ing	Ves	sels.	—	—	—	—	—	—	—	Lives lost so far as reported (in both ships and steamers)

III.—*A Table showing the Number of Wrecks and Casualties to Sailing Vessels reported Compared with the Average Number and Percentages*

Sailing Vessels.	First Quarter.				Second Quarter.			
	1874.		Average Eight previous Years.		1874.		Average Eight previous Years.	
	Number.	Per centage.	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.
1. *Missing*	17	0·61	29	0·87	41	1·99	34	1·94
2. *Abandoned*—								
Recovered	14	0·50	22	0·68	20	0·97	11	0·62
Lost	65	2·32	79	2·41	55	2·66	49	2·80
Total	79	2·82	101	3·09	75	3·63	60	3·42
3. *Collision*—								
Not damaged	153	5·47	129	3·93	78	3·78	86	4·92
Damaged	303	10·82	360	10·99	249	12·06	191	10·94
Sunk	40	1·43	44	1·35	21	1·02	31	1·81
Total	496	17·72	533	16·27	348	16·86	308	17·67
4. Sinking from causes other than collision	78	2·78	93	2·84	52	2·52	76	4·33
5. *Stranded*—								
Got off	430	15·35	416	12·71	304	14·73	279	16·02
Not got off	279	9·96	336	10·25	216	10·46	178	10·17
Subsequent fate not reported	29	1·04	99	3·01	26	1·26	46	2·67
Total	738	26·35	851	25·97	546	26·45	503	28·86
6. Capture	—	—	3	0·08	—	—	3	0·16
7. Piracy	—	—	1	0·03	—	—	1	0·05
8. Burnt or on fire	36	1·29	36	1·10	34	1·65	33	1·89
9. Dismasted or disabled	84	3·00	116	3·55	109	5·28	69	3·98
10. Jettison of cargo under deck	43	1·54	64	1·96	36	1·74	29	1·66
11. Jettison of deckload or washed overboard	46	1·64	37	1·13	25	1·21	21	1·20
12. Leaky	300	10·71	346	10·56	205	9·93	189	10·86
13. Loss of anchors or chains	101	3·61	209	6·35	68	3·29	40	2·29
14. Mutiny, sickness, casualty to crew or refusing duty	67	2·38	79	2·40	34	1·65	52	2·97
15. Ship damaged, loss of bulwarks, sails, &c.	710	25·34	774	23·62	487	23·60	321	18·41
16. Water-logged	6	0·21	6	0·17	4	0·19	5	0·31
Number of casualties	2,801	—	3,278	—	2,064	—	1,744	—
Number of vessels	2,625	—	3,003	—	1·963	—	1,647	—

in "Lloyd's List," during the Four Quarters of 1874, *and the respective Percentages thereon for the same period of the Eight Previous Years.*

Third Quarter.				Fourth Quarter.				Sailing Vessels.
1874.		Average Eight previous Years.		1874.		Average Eight previous Years.		
Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	
37	1·85	15	0·77	16	0·38	15	0·40	1. *Missing*
								2. *Abandoned*—
8	0·40	13	0·68	30	0·71	26	0·68	Recovered
30	1·50	38	1·97	104	2·45	95	2·47	Lost
38	1·90	51	2·65	134	3·16	121	3·15	Total
								3. *Collision*—
99	4·95	97	4·99	155	3·66	167	4·37	Not damaged
271	13·55	227	11·67	430	10·15	394	10·28	Damaged
30	1·50	31	1·59	48	1·13	50	1·30	Sunk
400	20·00	355	18·25	633	14·94	611	15·95	Total
50	2·50	75	3·86	82	1·94	114	2·99	4. Sinking from causes other than collision
								5. *Stranded*—
298	14·70	268	13·78	531	12·53	474	12·36	Got off
159	7·95	213	10·95	438	10·33	479	12·49	Not got off
14	0·70	57	2·91	96	2·27	133	3·48	Subsequent fate not reported
471	23·55	538	27·64	1,065	25·13	1,086	28·33	Total
—	—	5	0·24	—	—	7	0·19	6. Capture
—	—	2	0·10	—	—	1	0·02	7. Piracy
38	1·90	37	1·87	63	1·49	44	1·14	8. Burnt or on fire
95	4·75	105	5·40	195	4·60	187	4·87	9. Dismasted or disabled
28	1·40	30	1·54	64	1·51	59	1·54	10. Jettison of cargo under deck
20	1·00	20	1·03	180	4·25	80	2·10	11. Jettison of deckload or washed overboard
268	13·40	257	13·17	445	10·50	397	10·37	12. Leaky
52	2·60	50	2·56	234	5·52	216	5·62	13. Loss of anchors or chains
57	2·85	50	2·57	68	1·60	69	1·81	14. Mutiny, sickness, casualty to crew or refusing duty
444	22·20	351	18·04	1,040	24·54	813	21·22	15. Ship damaged, loss of bulwarks, sails, &c.
2	0·10	6	0·31	19	0·45	12	0·30	16. Water-logged
2,000	—	1,947	—	4,238	—	3,832	—	Number of casualties
1,922	—	1,843	—	3,919	—	3,554	—	Number of vessels

IV.—*A Table showing the Number of Wrecks and Casualties to Steamers reported in*
Compared with the Average Number and Percentages

Steamers.	First Quarter.				Second Quarter.			
	1874.		Average Eight previous Years.		1874.		Average Eight previous Years.	
	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.
1. *Missing*	6	1·00	4	0·95	7	1·28	1	0·46
2. *Abandoned*—								
Recovered	—	—	—	—	1	0·18	—	—
Lost	—	—	2	0·39	3	0·55	1	0·13
Total	—	—	2	0·48	4	0·73	1	0·25
3. *Collision*—								
Not damaged	81	13·50	63	14·96	71	12·91	52	17·28
Damaged	74	12·33	52	12·45	64	11·64	38	12·81
Sunk	7	1·17	5	1·31	5	0·91	4	1·30
Total	162	27·00	120	28·72	140	25·46	94	31·39
4. Sinking from causes other than collision	16	2·67	11	2·63	13	2·36	8	2·71
5. *Stranded*—								
Got off	133	22·17	72	17·14	119	21·63	67	22·50
Not got off	19	3·16	16	3·94	26	4·73	13	4·17
Subsequent fate not reported	3	0·50	9	2·18	3	0·55	5	1·59
Total	155	25·83	97	23·26	148	26·91	85	28·26
6. Capture	—	—	—	—	—	—	—	—
7. Piracy	—	—	—	—	—	—	—	—
8. Burnt or on fire	15	2·50	9	2·24	12	2·19	11	3·67
9. Dismasted or disabled	5	0·83	5	1·08	5	0·91	2	0·67
10. Jettison of cargo under deck	11	1·83	5	1·28	9	1·64	5	1·54
11. Jettison of deckload or washed overboard	—	—	5	1·26	2	0·37	1	0·38
12. Leaky	18	3·00	11	2·63	9	1·64	9	3·17
13. Loss of anchors or chains	4	0·67	8	1·79	5	0·91	2	0·63
14. Machinery damaged or short of coals	109	18·17	86	20·48	147	26·73	60	19·59
15. Mutiny, sickness, casualty to crew, or refusing duty	13	2·17	5	1·22	4	0·73	4	1·46
16. Ship damaged, loss of sails, bulwarks, &c.	86	14·33	50	11·94	45	8·13	16	5·25
17. Water-logged	—	—	—	—	—	—	—	—
Number of casualties	600	—	419	—	550	—	299	—
Number of steamers	586	—	402	—	526	—	287	—

"Lloyd's List" during the Four Quarters of 1874, *and the respective Percentages thereon, for the same period of the Eight Previous Years.*

Third Quarter.				Fourth Quarter.				Steamers.
1874.		Average Eight Previous Years.		1874.		Average Eight Previous Years.		
Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	
1	0·21	1	0·15	3	0·34	2	0·34	1. *Missing*
								2. *Abandoned*—
—	—	—	—	—	—	1	0·10	Recovered
—	—	1	0·19	—	—	1	0·24	Lost
—	—	1	0·23	—	—	2	0·34	Total
								3. *Collision*—
85	17·38	64	19·12	97	11·01	90	17·30	Not damaged
62	12·68	49	14·60	120	13·62	67	12·81	Damaged
8	1·64	6	1·90	8	0·91	8	1·54	Sunk
155	31·70	119	35·62	225	25·54	165	31·65	Total
13	2·66	9	2·54	21	2·38	15	2·88	4. Sinking from causes other than collision
								5. *Stranded*—
110	22·49	69	20·54	165	18·73	103	19·85	Got off
20	4·09	16	4·78	34	3·86	25	4·78	Not got off
3	0·61	3	0·82	10	1·13	7	1·25	Subsequent fate not reported
133	27·19	87	26·14	209	23·72	135	25·88	Total
—	—	—	—	1	0·11	1	0·19	6. Capture
—	—	—	—	—	—	—	—	7. Piracy
14	2·86	10	3·06	16	1·82	11	2·19	8. Burnt or on fire
2	0·41	3	0·86	18	2·04	7	1·44	9. Dismasted or disabled
6	1·23	5	1·49	16	1·82	4	0·84	10. Jettison of cargo under deck
—	—	1	0·45	13	1·48	7	1·44	11. Jettison of deckload or washed overboard
14	2·86	7	2·05	28	3·18	13	2·45	12. Leaky
4	0·82	1	0·37	10	1·13	6	1·15	13. Loss of anchors or chains
112	22·90	71	21·17	164	18·62	91	17·50	14. Machinery damaged or short of coals
4	0·82	5	1·57	4	0·45	5	0·94	15. Mutiny, sickness, casualty to crew, or refusing duty
31	6·34	14	4·26	153	17·37	56	10·74	16. Ship damaged, loss of sails, bulwarks, &c.
—	—	—	—	—	—	—	—	17. Water-logged
489	—	335	—	881	—	520	—	Number of casualties
479	—	323	—	844	—	505	—	Number of steamers

V.—*A Table showing the Results of Wrecks and Casualties to Ship and to Cargo, with List" during the Four Quarters of* 1874, *and the respective Percentages thereon, Compared*

	Sailing Vessels.							
	First Quarter.				Second Quarter.			
	1874.		Average Eight previous Years.		1874.		Average Eight previous Years.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Results to Ship—								
Total loss	449	17·11	562	18·70	375	19·10	353	21·41
Constructive loss	53	2·02	56	1·88	46	2·34	39	2·36
Great damage	303	11·54	323	10·76	205	10·44	159	9·64
Minor damage	1,280	48·76	1,461	48·65	969	49·36	699	42·43
Raised after sinking	20	0·76	10	0·32	6	0·31	8	0·51
Not damaged or results unknown	520	19·81	591	19·69	362	18·44	389	23·65
Total	2,625	—	3,003	—	1,963	—	1,647	—
Results to Cargo so far as reported—								
All lost	286	10·89	345	11·49	226	11·51	185	11·26
Part lost	151	5·71	166	5·51	94	4·79	90	5·47
All saved	20	0·76	13	0·45	7	0·36	6	0·39
Forwarded	2	0·08	9	0·32	2	0·10	6	0·38
Heated	15	0·57	7	0·23	3	0·15	3	0·17
Shifted	38	1·45	51	1·69	20	1·02	18	1·11
Otherwise damaged	31	1·18	45	1·49	33	1·68	26	1·59
Salvage services	158	6·02	330	11·00	144	7·34	149	9·03
Lives—								
Crews saved	247	9·41	276	9·20	190	9·68	151	9·18
Crews drowned	39	1·49	23	0·77	55	2·80	16	0·98
Lives lost so far as reported in both ships and steamers	413	—	383	—	500	—	492	—

alvage Services, Crews Saved or Drowned and Lives Lost, so far as reported in " Lloyd's
vith the Average Number and Percentages for the same period of the Eight Previous Years.

Sailing Vessels.								
Third Quarter.				Fourth Quarter.				
1874.		Average Eight previous Years.		1874.		Average Eight previous Years.		
Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	
								Results to Ship—
298	15·50	369	20·05	678	17·30	742	20·88	Total loss
42	2·19	41	2·22	39	0·99	47	1·33	Constructive loss
181	9·42	228	12·35	417	10·64	428	12·05	Great damage
1,006	52·34	776	42·10	2,085	53·20	1,590	44·73	Minor damage
10	0·52	7	0·39	14	0·36	6	0·17	Raised after sinking
385	20·03	422	22·89	686	17·51	741	20·84	Not damaged or results unknown
1,922	—	1,843	—	3,919	—	3,554	—	Total
								Results to Cargo so far as reported—
160	8·32	186	10·07	299	7·63	379	10·67	All lost
80	4·16	88	4·80	309	7·88	195	5·48	Part lost
2	0·10	6	0·34	11	0·28	10	0·27	All saved
6	0·30	4	0·24	6	0·15	4	0·11	Forwarded
1	0·05	4	0·22	6	0·15	5	0·41	Heated
20	1·04	16	0·86	49	1·25	53	1·50	Shifted
38	1·98	30	1·62	42	1·07	34	0·96	Otherwise damaged
119	6·19	165	8·98	273	6·97	339	9·53	Salvage services
								Lives—
140	7·28	164	8·90	398	10·16	340	9·57	Crews saved
39	2·03	10	0·53	34	0·87	28	0·79	Crews drowned
219	—	246	—	352	—	598	—	Lives lost so far as reported in both ships and steamers

V.—*A Table showing the Results of Wrecks and Casualties to Ship and Cargo,*

	Steamers.							
	First Quarter.				Second Quarter.			
	1874.		Average Eight previous Years.		1874.		Average Eight previous Years.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Results to Ship—								
Total loss	46	7·85	37	9·20	48	9·12	23	8·26
Constructive loss	3	0·51	3	0·78	3	0·57	2	0·74
Great damage	66	11·26	28	7·05	26	4·94	24	8·30
Minor damage	266	45·39	172	42·68	259	49·24	112	38·96
Raised after sinking	2	0·34	3	0·68	6	1·15	3	0·96
Not damaged or results unknown	203	34·64	159	39·61	184	34·98	123	42·78
Total	586	—	402	—	526	—	287	—
Results to Cargo so far as reported—								
All lost	21	3·58	16	3·88	20	3·80	9	3·22
Part lost	18	3·07	15	3·79	25	4·75	13	4·56
All saved	1	0·17	1	0·22	—	—	—	—
Forwarded	—	—	1	0·22	—	—	—	—
Heated	1	0·17	—	—	—	—	—	—
Shifted	15	2·56	6	1·43	7	1·33	1	0·35
Otherwise damaged	11	1·88	9	2·27	8	1·52	5	1·78
Salvage service	38	6·48	31	7·70	42	7·98	25	8·82
Lives—								
Crews saved	26	4·44	16	3·91	20	3·80	11	3·74
Crews drowned	6	1·02	3	0·68	7	1·33	—	—
Lives lost so far as reported in both ships and steamers (see Sailing Vessels, *supra*)	—	—	—	—	—	—	—	—

with Salvage Services, Crews Saved or Drowned and Lives Lost—Contd.

Steamers.								
Third Quarter.				Fourth Quarter.				
1874.		Average Eight previous Years.		1874.		Average Eight previous Years.		
Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	
								Results to Ship—
41	8·56	30	9·31	53	6·28	50	9·81	Total loss
1	0·21	2	0·54	5	0·59	2	0·40	Constructive loss
28	5·84	30	9·27	76	9·00	41	8·07	Great damage
230	48·02	120	37·29	420	49·76	195	38·53	Minor damage
4	0·83	3	0·85	6	0·71	4	0·87	Raised after sinking
175	36·54	138	42·74	284	33·65	212	42·32	Not damaged or results unknown
479	—	323	—	844	—	505	—	Total
								Results to Cargo so far as reported—
14	2·92	11	3·36	28	3·32	16	3·17	All lost
21	4·38	12	3·79	40	4·74	20	4·04	Part lost
—	—	—	—	1	0·12	1	0·12	All saved
—	—	—	—	—	—	—	—	Forwarded
1	0·21	—	—	—	—	1	0·12	Heated
4	0·83	2	0·62	16	1·90	9	1·78	Shifted
18	3·76	6	2·01	21	2·49	11	2·13	Otherwise damaged
25	5·22	24	7·50	41	4·86	39	7·75	Salvage service
								Lives—
19	3·97	11	3·36	30	3·55	15	3·07	Crews saved
2	0·42	—	—	3	0·36	1	0·22	Crews drowned
—	—	—	—	—	—	—	—	Lives lost so far as reported in both ships and steamers (see Sailing Vessels, *supra*)

IV.—*The Fires in London during the Year* 1875, *and the Metropolitan Fire Brigade.*

SUBJOINED are some interesting particulars from Captain Shaw's annual report to the Metropolitan Board of Works:

"The number of calls for fires or supposed fires received during the year has been 1,668. Of these 90 were false alarms, 49 proved to be only chimney alarms, and 1,529 were calls for fires, of which 163 resulted in serious damage, and 1,366 in slight damage.

"These figures refer only to the regular calls for fires, or supposed fires, involving the turning out of firemen, fire engines, horses, and coachmen; they do not include trifling damages by fires which were not sufficiently important to require the attendance of firemen; neither do they include the ordinary calls for chimneys on fire, which are separately accounted for further on.

"The fires of 1875, compared with those of 1874, show a decrease of forty-four; and compared with the average of the last ten years, there is a decrease of fifty-nine.

"The proportion of serious to slight losses in 1875—163 to 1,366—is about as favourable as we have hitherto succeeded in making it.

"The following table gives it to both in actual numbers and percentages, and shows that we have had considerable success in reducing losses during the year:—

Year.	Number of Fires.			Percentage.		
	Serious.	Slight.	Total.	Serious.	Slight.	Total.
1866........	326	1,012	1,338	25	75	100
'67........	245	1,152	1,397	18	82	100
'68........	235	1,433	1,668	14	86	100
'69........	199	1,373	1,572	13	87	100
'70........	276	1,670	1,946	14	86	100
'71........	207	1,635	1,842	11	89	100
'72........	120	1,374	1,494	8	92	100
'73........	166	1,382	1,548	11	89	100
'74........	154	1,419	1,573	10	90	100
'75........	163	1,366	1,529	11	89	100

"The number of fires in the metropolis in which life has been seriously endangered during the year 1875 has been 41; and the number of these in which life has been lost has been 26.

"The number of persons seriously endangered by fire has been 109, of whom 80 were saved, and 29 lost their lives. Of the 29 lost, 14 were taken out alive, but died afterwards in hospitals or elsewhere, and 15 were suffocated or burned to death.

"The number of calls for chimneys has been 4,050. Of these 1,248 proved to be false alarms, and 2,082 were for chimneys on fire. In these cases there was no attendance of engines, but only of firemen with hand-pumps.

"The number of journeys made by the fire engines of the forty-eight stations has been 6,155, and the total distance run has been 18,710 miles.

"The quantity of water used for extinguishing fires in the metropolis during the year has been 10,502,605 gallons—in round numbers a little more than 10½ million gallons, or about 47,000 tons. Of this quantity 13,876 tons, or about one-third of the whole, was taken from the river, canals, and docks, and the remainder from the street pipes.

"During the year there have been four cases of short supply of water, nineteen of late attendance of turncocks, and nine of no attendance, making altogether thirty-two cases in which the water arrangements were unsatisfactory.

"The strength of the brigade at present is as follows:—

48 fire engine stations.
106 fire escape stations.
4 floating stations.
54 telegraph lines.
98 miles of telegraph lines.
3 floating steam fire engines.
1 iron barge, to carry a land steam fire engine.
5 large land steam fire engines.
21 small land steam fire engines.
14 seven-inch manual fire engines.
59 six-inch manual fire engines.
12 under six-inch manual fire engines.
132 fire escapes.
395 firemen, including the chief officer, the superintendents, and all ranks.

"The number of firemen employed on the several watches kept up throughout the metropolis is at present 94 by day and 181 by night, making a total of 275 in every 24 hours; the number of those sick, injured, on leave, or under instruction, is usually between 40 and 50; the remaining men are available for general work at fires.

"Our list of wounds and other injuries for 1875 is, as usual, large; but, so long as the men work well, no diminution of accidents can be expected.

"There have been during the year 275 cases of ordinary illness, and 64 injuries, making a total of 339 cases, of which many were very serious, and four terminated in death."

The tables appended to the report furnish the following particulars:—

By a table of the fires classified according to trades, we find they occurred in the following order of frequency; viz.:—

	Number of Fires.
At private houses	317
,, lodgings	204
,, victuallers	59
,, oil and colourmen	37
,, tailors, clothiers, and outfitters	30
,, cabinet makers	26
,, stables	25
,, drapers	25
,, houses under repair and building	19
,, grocers	19
,, farming stock	19
,, tobacconists	18
,, greengrocers	18
,, coffee houses	18
,, builders	15
,, soot merchants	14
,, offices	14
,, printers	13

	Number of Fires—*Contd.*
At bakers	13
,, beershops	13
,, booksellers	13
,, boot and shoe makers	12
,, butchers	12
,, china, glass, and earthenware dealers	12
,, marine store dealers	12
,, unoccupied	11
,, milliners and dressmakers	11
,, railways	11
	1,010
Remainder, varying from 10 to 1	519
Total	1,529

The following table will show to what causes the fires have been assigned, and which of them have been most prevalent:—

	Cause.	Number of Fires.
1.	Unknown	307
2.	Lamps (not gas) and lights	212
3.	Sparks—from fires, &c.	164
4.	Candle	163
5.	Flues—defective	138
6.	Gas	131
7.	Children—playing with matches, &c.	57
8.	Overheating of stoves, &c.	55
9.	Hot ashes	50
10.	Boiling over of oil, fat, pitch, &c.	34
11.	Lucifers	40
12.	Airing and drying stoves	24
13.	Smoking tobacco	22
14.	Stoves improperly set	20
15.	Spontaneous ignition	16
16.	Lime	11
17.	Boilers	10
18.	Vapour—of spirit and oil	9
19.	Hearths and fireplaces—defective	8
20.	Men at work—gasfitters and plumbers	8
21.	Fumigation	7
22.	Fireworks—letting off	5
23.	Burning of rubbish	5
24.	Intoxication	5
25.	Incendiarism	3
26.	Spirit	3
27.	Ironing stoves	3
	Miscellaneous and doubtful	19
	Total	1,529

From the daily and hourly summaries furnished in the report, we find that the largest number of fires (236) occurred on Thursday, and the smallest number (200) on Sunday.

The following table, which gives the total of the fires of each day of the week during the five years 1871-75, is compiled from Captain Shaw's returns for those years.

Year.	Sunday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
1871........	286	202	247	302	271	258	276
'72........	199	206	213	207	220	220	229
'73........	202	209	237	199	230	243	228
'74........	222	228	228	195	240	231	229
'75........	200	203	231	227	236	209	223
Total	1,109	1,048	1,156	1,130	1,197	1,161	1,185

The *hours* subject to the greatest number of disasters from fire are from 7 to 11 P.M. On the other hand, the smallest number of fires occur from 4 to 10 A.M.

A monthly summary shows that the greatest number of fires (169) occurred in May, and the smallest number (96) in October.

It is pleasant to notice that *four* firemen are commended for special merit in saving life from fire during the year, and that Captain Shaw concludes his report by stating that "the condition of the brigade with regard to discipline and general efficiency is in all respects perfectly satisfactory."

V.—*English Literature in* 1875.

THE following extracts from the December number of the *Publishers' Circular* embrace the analytical and summary tables of books published in 1875, and compare the figures therein with those of 1874:—

"1875 was a very good, in the sense of having been a very productive year, and a decided improvement on 1874. The works on theology published last year show an inclination towards recovery which is marked. The decrease last year was 150. This year we have 782 against 634, a very marked sign of recovery, although an absolute decrease. In educational, classical, and philological works, where we confess we had looked for a much larger increase, on account of the New Educational Code and the demands of the school boards, we find a more serious decrease, but yet a firmness. In 1874, of new books, new editions, and American importations, we had just as many as there are days in the year, 365; to-day we have to chronicle only 343, or a decrease of 20! We are by no means sorry to put 219 juveniles in 1875 as against 229 of last year. Law increases slightly, we suppose from publications on the new procedure; we have 135 law books in 1875, against 124 in 1874. In fiction there is again an increase: the total being 992, against 824 in 1874. History also has an increase, the numbers being 436 in 1875, against 393 in 1874. Arts are in full cultivation: we have to chronicle the issue of 686 during the year, as against 623 in issues of last year. In belles lettres, essays, and other interesting monographs there is again a slight declination, 199 as against 211 of 1874. We have before this noticed that poetry and the drama have again revived, and that not only are there more poems published, but purchased, than before; hence we can in this, the very flower and grace of literature, chronicle an increase. In 1874 we issued 305 volumes of poems and plays—which should be poems, and which in cases such as that of Tennyson's *Queen Mary* are so; in 1875 we had 371 issues. With this small but sufficient comfort we end. The tide is turning, and it is evident that British intellect and industry are still in full force."

Analytical Table of Books Published in 1875.

Subjects.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total of Books on each Subject for the Year.	
Theology, sermons, biblical, &c.	*33	31	43	42	47	41	58	33	30	40	37	121	556	
	†10	29	19	21	21	18	21	7	5	7	10	35	203	
	‡ 1	2	4	4	4	4	—	—	2	2	—	2	25	784
Educational, classical, and philological	*13	19	8	17	18	16	19	25	22	22	24	67	270	
	† 4	5	6	9	5	3	12	2	3	2	5	9	65	
	‡ 2	—	—	—	1	1	2	—	1	1	—	—	8	343
Juvenile works and tales	*11	2	4	9	1	3	9	8	14	13	55	59	188	
	† 2	1	1	2	—	2	—	1	3	4	3	10	29	
	‡—	—	—	1	—	1	—	—	—	—	—	—	2	219
Novels, tales, and other works of fiction	*50	22	46	44	52	21	58	25	38	54	66	168	644	
	†11	15	19	30	46	33	34	22	25	24	28	43	330	
	‡ 3	2	1	—	—	2	2	—	1	1	2	4	18	992
Law, jurisprudence, &c.	*—	5	4	8	4	3	5	—	1	6	14	18	68	
	†—	8	4	6	3	1	4	1	3	2	4	10	46	
	‡ 3	1	1	—	2	2	3	—	2	1	5	1	21	135
Political and social economy, trade and commerce	*—	3	4	5	4	9	4	3	4	5	6	21	68	
	†—	3	1	4	4	4	5	2	1	1	1	7	33	
	‡ 8	3	1	1	2	1	4	—	4	—	—	1	25	126
Arts, science, and illustrated works	*22	28	24	27	35	23	35	38	26	34	45	98	435	
	† 6	10	16	13	27	7	18	13	9	12	19	37	187	
	‡ 3	6	2	4	12	8	8	—	5	5	6	5	64	686
Voyages, travels, and geographical research	*10	9	9	16	21	15	20	17	9	15	43	43	227	
	† 3	3	6	9	4	14	5	2	5	4	9	9	73	
	‡ 3	2	3	1	2	8	4	—	2	—	2	6	33	333
History, biography, &c.	*19	21	18	26	21	20	29	8	10	19	31	50	272	
	† 4	5	8	9	11	10	9	7	11	11	11	23	119	
	‡ 1	6	7	2	2	6	3	—	1	4	6	7	45	436
Poetry and the drama	*20	11	19	19	9	12	28	13	10	14	23	44	222	
	† 6	5	8	21	14	9	7	6	12	13	10	15	126	
	‡ 2	1	1	—	2	2	3	—	1	6	1	4	23	371
Year books and serials in volumes	*32	29	22	11	12	6	19	12	8	9	9	76	245	
	† 1	4	—	—	—	—	—	—	—	—	—	—	5	
	‡ 1	1	—	1	3	1	1	—	—	—	—	—	8	258
Medicine, surgery, &c.	* 3	7	5	8	4	2	8	10	1	7	5	15	75	
	† 3	2	3	4	2	1	7	3	2	4	3	6	40	
	‡—	2	1	—	3	1	2	—	1	—	1	1	12	127
Belles lettres, essays, monographs, &c.	*20	10	12	8	8	5	8	3	6	8	12	29	129	
	† 7	8	5	5	5	1	4	2	1	1	6	3	48	
	‡ 4	1	2	1	—	5	3	—	—	5	—	1	22	199
Miscellaneous, including pamphlets, not sermons	* 6	14	6	17	15	19	19	9	6	10	7	46	174	
	†—	1	3	1	5	2	5	2	1	—	1	6	27	
	‡—	1	2	—	—	2	—	—	—	2	1	2	10	211
														5,220

* New books. † New editions. ‡ American importations.

Summary for each Month.

	New Books.	New Editions.	American Importations.
January	239	57	31
February	211	99	28
March	224	99	25
April	257	134	15
May	251	147	33
June	195	105	44
July	319	131	35
August	204	70	—
September	185	81	20
October	256	85	27
November	377	110	24
December	855	213	34
	3,573	1,331	316

Note.—Making the total during the twelve months, full titles, 5,220 given in the *Publishers' Circular*.

REGISTRATION OF THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES—Quarter ended September, 1875.

BIRTHS and DEATHS—Quarter ended December, 1875.

A.—*Serial Table of* Marriages, Births, *and* Deaths, *returned in the Years* 1875-69, *and in the* Quarters *of those Years.*

Calendar Years, 1875-69:—*Numbers.*

Years	'75.	'74.	'73.	'72.	'71.	'70.	'69.
Marriages No.	—	201,605	205,615	201,267	190,112	181,655	176,970
Births .... ,,	850,187	854,307	829,778	825,907	797,428	792,787	773,381
Deaths .... ,,	546,317	526,701	492,520	492,265	514,879	515,329	494,828

Quarters *of each Calendar Year,* 1875-69.

(I.) Marriages:—*Numbers.*

Qrs. ended last day of	'75.	'74.	'73.	'72.	'71.	'70.	'69.
March........ No.	42,237	41,417	41,217	40,539	36,305	36,455	37,752
June .... ,,	48,360	52,737	53,408	50,380	48,831	46,720	43,202
September ,,	49,817	49,014	49,709	49,818	46,536	43,900	43,978
December ,,	—	58,437	61,281	60,530	58,440	54,580	52,038

(II.) Births:—*Numbers.*

Qrs. ended last day of	'75.	'74.	'73.	'72.	'71.	'70.	'69.
March........ No.	215,251	214,437	215,744	208,752	209,523	206,366	203,775
June .... ,,	214,650	217,605	206,516	208,790	201,165	203,615	188,618
September ,,	210,781	209,898	204,167	201,746	193,271	192,521	190,394
December ,,	209,505	212,367	203,351	206,619	193,469	190,285	190,594

(III.) Deaths:—*Numbers.*

Qrs. ended last day of	'75.	'74.	'73.	'72.	'71.	'70.	'69.
March........ No.	162,514	136,528	132,432	134,952	138,393	143,773	133,096
June .... ,,	130,797	123,990	118,582	120,835	120,793	121,128	118,947
September ,,	121,459	124,099	114,676	118,927	121,332	124,297	114,644
December ,,	131,547	142,084	126,830	117,551	134,361	126,131	128,141

Annual Rates of Marriages, Births, *and* Deaths, *per* 1,000 Persons Living *in the Years* 1875-69, *and the* Quarters *of those Years.*

Calendar Years, 1875-69:—*General Ratios.*

Years............	'75.	Mean '65–74.	'74.	'73.	'72.	'71.	'70.	'69.
Estmtd. Popln. of England *in thousands* in middle of each Year....	23,944,	—	23,649,	23,356,	23,068,	22,783,	22,501,	22,223,
Persons Married	—	16·9	17·1	17·6	17·5	16·7	16·1	15·9
Births	35·5	35·4	36·1	35·5	35·8	35·0	35·2	34·8
Deaths................	22·8	22·3	22·3	21·1	21·3	22·6	22·9	22·3

Quarters *of each Calendar Year,* 1875-69.

(I.) Persons Married:—*Ratio per* 1,000.

Qrs. ended last day of	'75.	Mean '65–74.	'74.	'73.	'72.	'71.	'70.	'69.
March	14·3	13·8	14·2	14·3	14·1	12·9	13·2	13·8
June..................	16·2	17·2	17·9	18·3	17·5	17·2	16·7	15·6
September	16·5	16·4	16·4	16·9	17·1	16·2	15·5	15·7
December	—	20·0	19·6	20·8	20·8	20·4	19·2	18·6

(II.) Births:—*Ratio per* 1,000.

Qrs. ended last day of	'75.	Mean '65–74.	'74.	'73.	'72.	'71.	'70.	'69.
March	36·5	37·0	36·8	37·5	36·3	37·3	37·3	37·3
June..................	36·0	36·2	36·9	35·5	36·3	35·5	36·4	34·1
September	34·9	34·4	35·2	34·7	34·7	33·7	34·0	34·1
December	34·7	34·4	35·6	34·5	35·5	33·7	33·6	34·1

(III.) Deaths:—*Ratio per* 1,000.

Qrs. ended last day of	'75.	Mean '65–74.	'74.	'73.	'72.	'71.	'70.	'69.
March	27·5	24·5	23·4	23·0	23·5	24·7	26·0	24·4
June..................	21·9	21·4	21·0	20·4	21·0	21·3	21·6	21·5
September	20·1	21·1	20·8	19·5	20·5	21·1	22·0	20·5
December	21·8	22·2	23·8	21·5	20·2	23·4	22·3	22·9

B.—*Comparative Table of* CONSOLS, PROVISIONS, PAUPERISM, *and* COAL *in each of the Nine* QUARTERS *ended December*, 1875.

1	2	3	4		5	6	7	8	9	10	
Quarters ending	Average Price of Consols (for Money).	Average Rate of Bank of England Discount.	Average Price of Wheat per Quarter in England and Wales.		Average Prices of Meat per lb. at the Metropolitan Meat Market (by the Carcass), with the *Mean* Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism. Quarterly Average of the Number of Paupers relieved on the *last day* of each week.		Sea-borne Coal in London Market per Ton.	
					Beef.	Mutton.		In-door.	Out-door.		
1873	£		*s.*	*d.*	*d. d. d.*	*d. d. d.*	*s. s. s.*			*s.*	*d.*
Dec. 31	92 4/8	6·3	61	1	5—8½ 6¾	5¾—8½ 7⅛	96—117 107	137,409	625,316	30	8
1874											
Mar. 31	92	3·6	62	2	5¼—8¼ 6¾	5½—8¼ 6⅞	112—127 119	146,082	641,910	23	5
June 30	93	3·4	61	1	5—8 6½	5—8¼ 6⅝	135—165 150	133,844	614,641	23	7
Sept. 30	92⅝	3·0	55	5	5¼—8 6⅝	5¼—7¾ 6½	75—104 90	129,993	592,989	23	3
Dec. 31	93	4·7	44	4	4⅞—8¼ 6½	4¾—8 6¼	73—96 84	138,868	587,772	24	7
1875											
Mar. 31	92 6/8	3·7	42	6	5—8 6½	4¾—8 6½	81—111 96	146,708	622,652	22	5
June 30	93 6/8	3·5	42	6	5¼—8¼ 6¾	5½—9½ 7½	80—120 100	131,717	592,362	20	8
Sept. 30	94⅜	2·4	49	0	5½—8½ 7	5½—9½ 7½	70—93 82	125,614	555,409	20	4
Dec. 31	94⅜	3·2	46	7	5½—8¼ 6⅞	6—9¼ 7⅝	105—127 116	136,079	546,288	22	6

C.—*General Average Death-Rate Table:—Annual Rate of Mortality to* 1,000 *of the Population in the Eleven Divisions of England.*

Divisions.	Average Annual Rate of Mortality to 1,000 Living in						
	Ten Years, 1861-70.	1874. Quarters ending		1875. Quarters ending			
		Sept.	Dec.	March.	June.	Sept.	Dec.
England and Wales	22·4	20·8	23·8	27·5	21·9	20·1	21·8
I. London	24·3	20·6	26·2	27·2	21·9	21·5	24·3
II. South-Eastern counties	19·1	15·9	17·5	23·3	18·6	16·1	17·5
III. South Midland ,,	20·2	17·0	19·5	26·2	19·8	17·7	18·8
IV. Eastern counties	20·1	16·7	19·2	24·6	20·2	17·9	19·0
V. South-Western counties	19·9	16·6	18·8	26·0	20·1	15·9	19·6
VI. West Midland ,,	21·8	20·2	22·9	28·3	21·7	19·1	21·0
VII. North Midland ,,	20·8	20·6	23·3	27·3	21·8	21·2	21·2
VIII. North-Western ,,	26·3	26·5	29·6	31·4	24·6	23·3	25·7
IX. Yorkshire	24·0	23·8	27·6	28·1	23·7	22·9	23·5
X. Northern counties	22·7	25·2	26·7	27·3	22·3	23·7	22·6
XI. Monmouthshire and Wales	21·6	20·0	22·8	28·6	23·4	18·1	20·5

D.—*Special Average Death-Rate Table:*—ANNUAL RATE *of* MORTALITY *per* 1,000 *in* TOWN *and* COUNTRY DISTRICTS *of* ENGLAND *in each Quarter of the Years* 1875-73.

	Area in Statute Acres.	Population Enumerated. 1871.	Quarters ending	Annual Rate of Mortality per 1,000 in each Quarter of the Years 1875.	Mean '65-74.	1874.	1873.
In 134 Districts, and 57 Sub-districts, comprising the *Chief Towns*	3,184,419	12,900,142	March ..	28·9	26·6	25·2	24·4
			June	22·7	22·9	22·5	21·6
			Sept.	22·3	23·9	23·5	22·1
			Dec.	23·9	24·8	26·7	24·3
			Year	24·5	24·6	24·5	23·1
			Year	20·7	19·3	19·3	18·4
In the remaining Districts and Sub-districts of England and Wales, comprising chiefly *Small Towns* and *Country Parishes*	34,134,802	9,812,124	March ..	25·7	22·0	20·9	21·1
			June ...	20·8	19·4	19·1	18·7
			Sept.	17·2	17·3	17·2	15·9
			Dec.	18·9	18·6	19·9	17·9

Note.—The three months January, February, March, contain 90, and in leap year 91 days; the three months April, May, June, 91 days; and each of the last two quarters of the year, 92 days. For this inequality a correction is made in calculating the rate of mortality in the different quarters of the year.

E.—*Special Town Table:*—POPULATION; BIRTHS, DEATHS; MEAN TEMPERATURE *and* RAINFALL *in the Fourth Quarter of* 1875, *in* TWENTY-ONE *Large Towns.*

Cities, &c.	Estimated Population in the Middle of the Year 1875.	Births in 13 Weeks ending 1st Jan., 1876	Deaths in 13 Weeks ending 1st Jan., 1876.	Annual Rate to 1,000 Living during the 13 Weeks ending 1st Jan., 1876. Births.	Deaths.	Mean Temperature in 13 Weeks ending 1st Jan., 1876.	Rainfall in Inches in 13 Weeks ending 1st Jan., 1876.
Total of 21 towns in U. K.	7,742,889	70,567	48,775	36·6	25·3	42·7	11·15
London	3,445,160	30,534	20,839	35·6	24·3	42·9	7·50
Portsmouth..........................	122,632	959	590	31·4	19·3	—	—
Norwich	82,842	648	434	31·4	21·0	42·6	9·78
Bristol..........................	196,186	1,761	1,451	36·0	29·7	42·8	14·30
Wolverhampton..........................	71,718	648	410	36·3	22·9	41·8	11·80
Birmingham	366,325	3,761	2,249	41·2	24·6	42·7	11·97
Leicester..........................	109,830	1,035	678	37·8	24·8	42·5	10·47
Nottingham	92,251	769	604	33·5	26·3	42·1	9·57
Liverpool..........................	516,063	4,871	3,405	37·9	26·5	43·0	8·43
Manchester..........................	356,626	3,343	2,611	37·6	29·4	—	—
Salford..........................	135,720	1,574	1,135	46·6	33·6	42·2	10·09
Oldham	87,437	909	669	41·7	30·7	—	—
Bradford..........................	168,305	1,591	1,174	37·9	28·0	42·5	10·09
Leeds	285,118	2,869	1,931	40·4	27·2	43·2	8·98
Sheffield	267,881	2,735	1,598	41·0	23·9	42·6	11·64
Hull..........................	133,932	1,373	821	41·1	24·6	42·7	11·96
Sunderland..........................	106,342	1,062	529	40·1	20·0	—	10·76
Newcastle-on-Tyne	137,665	1,407	876	41·0	25·5	—	—
Edinburgh	211,626	1,655	1,232	31·4	23·4	—	—
Glasgow	534,564	4,935	3,368	37·1	25·3	—	—
Dublin..........................	314,666	2,128	2,171	27·1	27·7	43·6	2·49

F.—*Divisional Table:*—MARRIAGES *Registered in Quarters ended* 30*th September,* 1875-73; *and* BIRTHS *and* DEATHS *in Quarters ended* 31*st December,* 1875-73.

1	2	3	4	5	6
DIVISIONS: (England and Wales.)	AREA* in Statute Acres.	POPULATION, 1871. (*Persons.*)	MARRIAGES in Quarters ended 30th September. 1875.	1874.	1873.
		No.	No.	No.	No.
ENGLD. & WALES.... *Totals*	37,319,221	22,712,266	49,817	49,014	49,658
I. London	75,362	3,254,260	9,124	8,883	8,892
II. South-Eastern	3,994,431	2,167,726	3,920	3,917	3,832
III. South Midland	3,201,325	1,442,654	2,348	2,341	2,463
IV. Eastern	3,211,441	1,218,728	1,837	1,861	1,856
V. South-Western	4,981,170	1,880,777	3,197	3,125	3,227
VI. West Midland	3,945,460	2,720,669	5,590	5,623	5,890
VII. North Midland	3,535,445	1,406,935	2,919	2,824	2,921
VIII. North-Western	1,998,914	3,389,044	8,987	8,557	8,546
IX. Yorkshire	3,702,384	2,395,569	5,808	5,639	5,675
X. Northern	3,547,947	1,414,234	3,309	3,354	3,405
XI. Monmthsh. & Wales	5,125,342	1,421,670	2,903	3,893	2,951

7	8	9	10	11	12	13
DIVISIONS. (England and Wales.)	BIRTHS in Quarters ended 31st December.			DEATHS in Quarters ended 31st December.		
	1875.	1874.	1873.	1875.	1874.	1873.
	No.	No.	No.	No.	No.	No.
ENGLD. & WALES.... *Totals*	209,505	212,367	205,215	131,547	142,084	128,283
I. London	30,534	31,051	31,905	20,839	22,168	22,740
II. South-Eastern	17,372	17,677	17,508	10,210	10,058	9,261
III. South Midland	11,824	12,124	12,028	7,150	7,358	6,629
IV. Eastern	9,654	9,855	9,626	5,997	6,037	5,514
V. South-Western	13,410	13,840	13,624	9,409	8,969	8,534
VI. West Midland	25,369	26,301	24,920	15,048	16,270	15,114
VII. North Midland	13,131	13,253	12,788	7,801	8,512	7,047
VIII. North-Western	34,736	34,445	32,175	23,325	26,525	21,498
IX. Yorkshire	25,354	24,585	23,433	15,658	17,614	14,616
X. Northern	15,152	15,953	14,967	8,450	10,165	9,391
XI. Monmthsh. & Wales	12,969	13,273	12,241	7,660	8,413	7,939

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* These are revised figures, and may be found to differ somewhat from those first published.

G.—*General Meteorological Table, Quarter ended* 31*st December*, 1875.

[Abstracted from the particulars supplied to the Registrar-General by JAMES GLAISHER, ESQ., F.R.S., &c.]

1875. Months.	Temperature of Air. Mean.	Air. Diff. from Average of 104 Years.	Air. Diff. from Average of 34 Years.	Evaporation. Mean.	Evaporation. Diff. from Average of 34 Years.	Dew Point. Mean.	Dew Point. Diff. from Average of 34 Years.	Air—Daily Range. Mean.	Air—Daily Range. Diff. from Average of 34 Years.	Water of the Thames	Elastic Force of Vapour. Mean.	Elastic Force of Vapour. Diff. from Average of 34 Years.	Weight of Vapour in a Cubic Foot of Air. Mean.	Weight of Vapour. Diff. from Average of 34 Years.
	°	°	°	°	°	°	°	°	°	°	In.	In.	Grs.	Gr.
Oct.	48·5	−1·1	−1·7	46·4	−1·8	44·1	−2·1	13·7	−1·1	52·8	·290	−·024	3·3	−0·3
Nov. ...	42·1	−0·2	−1·5	40·2	−1·2	37·7	−1·8	10·1	−1·6	44·0	·227	−·020	2·6	−0·2
Dec.......	38·7	−0·4	−1·4	37·3	−1·3	35·5	−1·3	8·2	−1·3	38·3	·208	−·012	2·3	−0·3
Mean ...	43·1	−0·6	−1·5	41·3	−1·4	39·1	−1·7	10·7	−1·3	45·0	·242	−·019	2·7	−0·3

1875. Months.	Degree of Humidity. Mean.	Degree of Humidity. Diff. from Average of 34 Years.	Reading of Barometer. Mean.	Reading of Barometer. Diff. from Average of 34 Years.	Weight of a Cubic Foot of Air. Mean.	Weight of a Cubic Foot of Air. Diff. from Average of 34 Years.	Rain. Amnt.	Rain. Diff. from Average of 60 Years.	Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass. Number of Nights it was At or below 30°.	Number of Nights it was Between 30° and 40°.	Number of Nights it was Above 40°.	Lowest Reading at Night.	Highest Reading at Night.
			In.	In.	Grs.	Grs.	In.	In.	Miles.				°	°
Oct.	86	− 1	29·608	−·091	540	+ 1	4·1	+1·3	269	5	16	10	28·6	47·6
Nov. ...	86	− 2	29·630	−·125	547	− 1	2·9	+0·6	350	10	15	5	23·7	48·2
Dec.......	88	0	29·937	+·136	557	+ 5	1·1	−0·9	287	13	15	3	20·1	41·5
Mean ...	87	− 1	29·725	−·027	548	+ 2	Sum 8·1	Sum +1·0	Mean 302	Sum 28	Sum 46	Sum 18	Lowest 20·1	Highst 48·2

Note.—In reading this table it will be borne in mind that the sign (−) minus signifies below the average, and that the sign (+) plus signifies above the average.

The mean temperature of the air for October was 48°·5, being 1°·1 *lower* than the average of the preceding 104 years; and 1°·7 lower than the average of the preceding 34 years; it was 0°·7 and 4°·3 higher than the value in 1873, and 3°·2 lower than in 1874.

The mean temperature of the air for November was 42°·1, being 0°·2 and 1°·5 lower than the average of the preceding 104 years and 34 years; it was 2°·1 lower than the value in 1873, and 0°·1 higher than in 1874.

The mean temperature of the air for December was 38°·7, being 0°·4 lower than the average of the preceding 104 years, and 1°·4 lower than the average of the preceding 34 years; it was 1°·9 lower than the value in 1873, and 5°·5 higher than in 1874.

The mean high day temperatures of the air were 1°·7, 1°·4, and 2°·4 lower than their respective averages in October, November, and December.

The mean low night temperatures of the air were 1°·5 and 0°·9 lower than their respectives averages in October and December, but 0°·2 higher in November.

H.—*Special Meteorological Table, Quarter ended 31st December*, 1875.

1	2	3	4	5	6	7	8	9
NAMES OF STATIONS.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	*Mean Temperature of the Air.*	Mean Degree of Humidity.
	in.	°	°	°	°	°	°	
Guernsey	29·632	64·5	31·0	33·5	24·2	7·2	47·5	86
Osborne	29·641	65·3	22·8	42·5	29·8	10·0	44·3	89
Barnstaple	29·641	66·0	22·0	44·0	34·0	9·3	46·5	83
Blackheath	29·653	70·7	23·4	47·3	33·5	11·9	43·5	85
Oxford	29·639	67·9	23·1	44·8	32·5	9·0	43·8	86
Norwich	29·619	67·5	22·0	45·5	31·7	8·6	43·0	95
Llandudno	29·620	66·5	28·6	37·9	28·6	8·4	45·8	80
Liverpool	29·626	64·7	25·9	38·8	29·2	7·6	43·5	84
Stonyhurst	29·622	62·0	23·8	38·2	29·4	9·1	42·6	87
Bradford	29·633	62·8	25·2	37·6	29·3	7·8	43·0	86
North Shields	—	65·3	27·8	37·5	28·4	8·2	42·6	83
Miltown (Ireland)	—	61·0	17·0	44·0	34·3	11·1	42·5	86

10	11	12	13	14	15	16	17	18
NAMES OF STATIONS.	WIND.					Mean Amount of Cloud.	RAIN.	
	Mean estimated Strength.	Relative Proportion of					Number of Days on which it fell.	Amount Collected.
		N.	E.	S.	W.			in.
Guernsey	1·5	7	7	9	8	6·9	62	14·91
Osborne	0·5	7	7	9	8	7·6	49	10·79
Barnstaple	1·2	6	8	9	8	4·7	62	15·57
Blackheath	1·5	7	6	9	9	7·6	44	8·21
Oxford	0·9	6	7	8	10	8·5	50	12·17
Norwich	—	4	8	9	9	—	53	10·19
Llandudno	1·0	4	8	5	14	6·9	43	10·96
Liverpool	1·2	7	9	7	7	6·8	52	8·60
Stonyhurst	—	7	8	8	7	8·1	65	12·17
Bradford	0·8	7	8	7	9	7·5	58	10·11
North Shields	1·7	9	6	5	11	7·3	70	10·51
Miltown (Ireland)	1·8	6	7	10	7	5·6	55	8·55

No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER ENDED 31ST DECEMBER, 1875.

I.—*Serial Table:—Number of Births, Deaths, and Marriages in Scotland, and their Proportion to the Population estimated to the Middle of each Year, during each Quarter of the Years* 1875-71 *inclusive.*

	1875.		1874.		1873.		1872.		1871.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1st Quarter—										
Births	31,096	3·56	29,837	3·45	30,210	3·52	29,506	3·47	28,902	3·43
Deaths	25,116	2·87	20,775	2·40	21,443	2·50	21,245	2·50	19,756	2·34
Marriages ..	6,369	0·73	6,777	0·78	6,618	0·77	5,820	0·68	5,415	0·64
Mean Temperature	38°·7		40°·9		38°·1		40°·7		39°·1	
2nd Quarter—										
Births	32,294	3·70	32,295	3·73	31,283	3·64	30,726	3·61	30,583	3·63
Deaths	19,518	2·23	19,640	2·27	19,931	2·32	19,045	2·24	18,715	2·22
Marriages ..	6,638	0·76	6,730	0·78	6,690	0·78	6,398	0·75	5,946	0·70
Mean Temperature	50°·73		49°·53		49°·2		49°·2		48°·7	
3rd Quarter—										
Births	30,123	3·45	30,702	3·55	28,975	3·38	29,181	3·43	28,689	3·40
Deaths	18,050	2·07	18,099	2·09	17,072	1·99	16,692	1·96	16,835	2·00
Marriages ..	5,723	0·65	5,582	0·64	5,816	0·68	5,891	0·69	5,424	0·64
Mean Temperature	57°·27		56°·03		55°·4		55°·8		56°·3	
4th Quarter—										
Births	30,180	3·45	30,961	3·58	29,270	3·41	29,460	3·46	27,953	3·32
Deaths	19,101	2·19	22,162	2·54	18,411	2·15	18,759	2·20	19,338	2·29
Marriages ..	7,191	0·82	7,158	0·83	7,606	0·88	7,471	0·88	7,181	0·85
Mean Temperature	41°·7		39°·5		42°·7		41°·8		41°·3	
Year—										
Population.	3,495,214		3,462,916		3,430,923		3,399,226		3,367,922	
Births	123,693	3·54	123,795	3·57	119,738	3·49	118,873	3·49	116,127	3·45
Deaths	81,785	2·34	80,676	2·33	76,857	2·24	75,741	2·22	74,644	2·22
Marriages ..	25,921	0·74	26,247	0·76	26,730	0·76	25,580	0·75	23,966	0·71

II.—*Special Average Table:—Number of Births, Deaths, and Marriages in Scotland and in the Town and Country Districts during the Quarter ending* 31*st December*, 1875, *and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

Registration Groups of Districts.	Population.		Total Births.			Illegitimate Births.		
	Census, 1871.	Estimated to Middle of 1875.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,360,018	3,495,214	30,180	3·45	29	2,618	8·7	11·5
Principal towns	1,079,211	1,171,228	10,752	3·67	27	922	8·6	11·6
Large „	318,740	343,640	3,579	4·17	24	256	7·1	14·1
Small „	767,487	796,597	6,898	3·46	29	542	7·9	12·7
Mainland rural	1,062,576	1,053,718	8,040	3·05	33	844	10·5	9·5
Insular „	132,004	130,031	911	2·80	36	54	5·9	16·9

Registration Groups of Districts.	Population.		Deaths.			Marriages.		
	Census, 1871.	Estimated to Middle of 1875.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,360,018	3,495,214	19,101	2·19	45·7	7,191	0·82	122
Principal towns	1,079,211	1,171,228	7,292	2·49	40·2	2,699	0·92	109
Large „	318,740	343,640	2,243	2·61	38·3	788	0·92	109
Small „	767,487	796,597	4,236	2·13	46·9	1,587	0·80	125
Mainland rural	1,062,576	1,053,718	4,732	1·80	55·5	1,954	0·74	135
Insular „	132,004	130,031	598	1·84	54·3	163	0·50	200

III.—*Bastardy Table:—Proportion of Illegitimate in every Hundred Births in the Divisions and Counties of Scotland, during the Quarter ending* 31*st December*, 1875.

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
SCOTLAND	8·7						
Northern	8·0	Shetland	7·6	Forfar	10·2	Lanark	7·0
North-Western	6·4	Orkney	3·9	Perth	7·4	Linlithgow .	7·3
North-Eastern	15·2	Caithness	11·2	Fife	7·8	Edinburgh .	7·7
East Midland ..	8·9	Sutherland....	7·3	Kinross	6·0	Haddington	8·5
West Midland.	6·1	Ross and Cromarty	4·3	Clackmannan	9·5	Berwick	9·7
South-Western	7·0	Inverness	8·3	Stirling	7·6	Peebles........	9·0
South-Eastern	8·0	Nairn	12·3	Dumbarton ..	3·3	Selkirk	9·4
Southern	15·0	Elgin	16·1	Argyll	7·3	Roxburgh ..	10·9
		Banff	15·6	Bute	3·7	Dumfries	15·6
		Aberdeen	15·1	Renfrew........	7·0	Kirkcudbright ..	18·9
		Kincardine....	15·6	Ayr................	7·3	Wigtown	15·7

IV.—*Divisional Table:*—MARRIAGES, BIRTHS, *and* DEATHS *Registered in the Quarter ended 31st December*, 1875.

1 DIVISIONS. (Scotland)	2 AREA in Statute Acres.	3 POPULATION, 1871. (*Persons.*)	4 Marriages.	5 Births.	6 Deaths.
		No.	No.	No.	No.
SCOTLAND .... *Totals*	19,639,377	3,360,018	7,191	30,180	19,101
I. Northern	2,261,622	127,191	209	809	576
II. North-Western........	4,739,876	166,351	256	1,085	794
III. North-Eastern	2,429,594	393,199	860	3,219	1,606
IV. East Midland	2,790,492	559,676	1,196	4,779	2,835
V. West Midland	2,693,176	251,088	473	2,083	1,475
VI. South-Western........	1,462,397	1,183,218	2,786	12,627	8,055
VII. South-Eastern	1,192,524	475,523	1,042	4,110	2,659
VIII. Southern	2,069,696	203,772	369	1,468	1,101

No. III.—GREAT BRITAIN AND IRELAND.

SUMMARY *of* MARRIAGES, *in the Quarter ended 30th September*, 1875; *and* BIRTHS *and* DEATHS, *in the Quarter ended 31st December*, 1875.

COUNTRIES.	[000's omitted.] Area in Statute Acres.	Population, 1871. (*Persons.*)	Marriages.	Per 1,000 of Population.	Births.	Per 1,000 of Population.	Deaths.	Per 1,000 of Population.
		No.	No.	Ratio.	No.	Ratio.	No.	Ratio.
England and Wales	37,319,	22,712,	49,817	2·1	209,505	9·2	131,547	5·7
Scotland	10,639,	3,360,	5,723	1·7	30,180	8·9	19,101	5·6
Ireland	20,323,	5,412,	5,131	0·9	31,960	5·9	22,990	4·2
GREAT BRITAIN AND IRELAND	77,281,	31,484,	60,671	1·9	271,645	8·6	173,638	5·5

Note.—The numbers against Ireland represent the marriages, births, and deaths that the local registrars have *succeeded* in recording; but how far the registration approximates to absolute completeness, does not at present appear to be known. It will be seen that the Irish ratios of births, deaths, and marriages are much under those of England and Scotland.—ED. *S. J.*

I.—*Population, Area, Abstract of Acreage under Crops, &c., and Number of Live*

	Years.	England.	Wales.	Scotland.	Total for Great Britain.
Total population	1871	21,495,	1,217,	3,360,	26,072,
Total area (in statute acres)	—	32,597,	4,722,	19,496,	56,815,
Abstract of Acreage—					
Under all kinds of crops, bare fallow, and grass	1874	24,008,	2,679,	4,580,	31,267,
	'75	24,112,	2,696,	4,608,	31,416,
Under corn crops (including beans and peas)	'74	7,505,	516,	1,410,	9,431,
	'75	7,529,	512,	1,411,	9,452,
Under green crops	'74	2,764,	132,	685,	3,581,
	'75	2,848,	131,	685,	3,664,
" bare fallow	'74	607,	32,	21,	660,
	'75	515,	26,	17,	558,
" grass—Clover, &c., under rotation	'74	2,619,	365,	1,357,	4,341,
	'75	2,608,	361,	1,385,	4,354,
" permanent pasture	'74	10,438,	1,634,	1,106,	13,178,
	'75	10,536,	1,666,	1,110,	13,313,
Percentage of Acreage—*					
Under corn crops (including beans and peas)	1874	31·3	19·3	30·8	30·2
	'75	31·2	19·0	30·6	30·1
Under green crops	'74	11·5	4·9	15·0	11·5
	'75	11·8	4·9	14·8	11·7
" bare fallow	'74	2·5	1·2	0·4	2·1
	'75	2·1	0·9	0·4	1·8
" grass—Clover, &c., under rotation	'74	10·9	13·6	29·6	13·9
	'75	10·8	13·4	30·1	13·9
" permanent pasture	'74	43·5	61·0	24·2	42·1
	'75	43·7	61·8	24·1	42·4
Total	—	100·0	100·0	100·0	100·0
Acreage of orchards, or of arable or grass land, used also for fruit trees	1875	151,	3,	1,	155,
Acreage of woods, coppices, and plantations	'75	1,326,	127,	734,	2,187,
Abstract of Live Stock—					
Total number of horses†	1874	1,007,	124,	181,	1,312,†
	'75	1,032,	125,	184,	1,340,†
" cattle	'74	4,306,	665,	1,155,	6,125,
	'75	4,218,	651,	1,143,	6,013,
" sheep	'74	19,860,	3,065,	7,389,	30,314,
	'75	19,115,	2,952,	7,101,	29,167,
" pigs	'74	2,059,	214,	150,	2,423,
	'75	1,875,	203,	151,	2,230,
Number to every 100 *Acres under Crops, Fallow, and Grass*—					
Horses†	1874	4·2	4·6	3·9	4·2†
	'75	4·3	4·6	4·0	4·3†
Cattle	'74	17·9	24·8	25·2	19·6
	'75	17·5	24·2	24·8	19·1
Sheep	'74	82·7	114·4	161·3	97·0
	'75	79·3	109·5	154·1	92·8
Pigs	'74	8·6	8·0	3·3	7·7
	'75	7·8	7·5	3·3	7·1
Number of Returns Obtained—					
From occupiers of land	1875	421,	58,	81,	559,
" owners of live stock only	'75	4,	—	2,	6,

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* Stated exclusively of the small percentages for flax and hops.

† In Great Britain only horses used for agriculture, unbroken horses, and mares kept solely for breeding, are included in the returns. The proportionate number of horses for 100 acres in Great Britain in 1875, would be increased from 4·3 to 7·2 by adding to the number included in the Agricultural Returns 915,000 for the estimated number of all other descriptions of horses. In Ireland all descriptions of horses are included in the returns.

Stock, in each Division of the United Kingdom. [000's omitted from the quantities.]

Ireland.‡	Isle of Man.	Channel Islands.		Total for United Kingdom.	Years.	
		Jersey.	Guernsey, &c.			
5,412,	54,	57,	34,	31,629,	1871	Total population
20,820,	145,	29,	20,	77,829,	—	Total area (in statute acres)
						Abstract of Acreage—
15,752,§	91,¶	— ‖	12,	47,143,	1874	Under all kinds of crops, bare fallow, and grass
15,775,§	92,	19,	12,	47,314,	'75	
1,902,	26,	— ‖	2,	11,365,	'74	Under corn crops (including beans and peas)
1,916,	26,	3,	2,	11,399,	'75	
1,353,	13,	— ‖	3,	4,958,	'74	Under green crops
1,370,	12,	7,	4,	5,057,	'75	
12,	1,	— ‖	—	673,	'74	,, bare fallow
11,	—	—	—	570,	'75	
1,906,	33,	— ‖	1,	6,285,	'74	,, grass—Clover, &c., under rotation
1,914,	35,	3,	1,	6,338,	'75	
10,472,	21,¶	— ‖	5,	23,680,	'74	,, permanent pasture
10,432,	18,	5,	5,	23,773,	'75	
						*Percentage of Acreage—**
12·1	28·1	—	17·0	24·1	1874	Under corn crops (including beans and peas)
12·1	28·4	16·1	16·3	24·1	'75	
8·6	14·1	—	27·6	10·5	'74	Under green crops
8·7	12·9	38·4	30·7	10·7	'75	
0·1	0·7	—	0·6	1·4	'74	,, bare fallow
0·1	0·5	1·3	0·3	1·2	'75	
12·1	34·6	—	8·4	13·3	'74	,, grass—Clover, &c., under rotation
12·3	38·4	17·3	12·1	13·4	'75	
66·5	22·5	—	46·4	50·2	'74	,, permanent pasture
66·1	19·8	26·9	40·6	50·2	'75	
100·0	100·0	100·0	100·0	100·0	—	Total
—	—	1,	1,	—	1875	Acreage of orchards, or of arable or grass land, used also for fruit trees
325,	—	—	—	—	'75	Acreage of woods, coppices, and plantations
						Abstract of Live Stock—
526,†	6,	— ‖	2,	1,847,	1874	Total number of horses†
526,†	5,	2,	2,	1,876,	'75	
4,118,	20,	— ‖	7,	10,281,	'74	,, cattle
4,112,	19,	12,	7,	10,163,	'75	
4,438,	84,	— ‖	1,	34,838,	'74	,, sheep
4,248,	74,	1,	2,	33,492,	'75	
1,096,	4,	— ‖	6,	3,537,	'74	,, pigs
1,249,	4,	6,	6,	3,496,	'75	
						Number to every 100 Acres under Crops, Fallow, and Grass—
3·3	6·1	—	15·8	3·9	1874	Horses†
3·3	5·8	11·5	16·8	4·0	'75	
26·1	20·9	—	59·6	21·8	'74	Cattle
26·1	20·9	60·3	60·8	21·5	'75	
28·2	89·7	—	10·5	73·9	'74	Sheep
26·9	81·1	3·0	12·8	70·8	'75	
7·0	4·6	—	53·4	7·5	'74	Pigs
7·9	4·7	30·6	48·4	7·4	'75	
						Number of Returns Obtained—
600,	2,	2,	2,	—	1875	From occupiers of land
—	—	—	—	—	'75	,, owners of live stock only

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‡ The detailed returns for Ireland will be found in the annual reports prepared by the Registrar-General and laid before Parliament.

§ Including under flax, 106,886 acres in 1874, and 101,248 acres in 1875.

‖ Returns not obtained in 1874: the figures for 1873 have been used in making the Total for the United Kingdom.

¶ The acreage returned for permament pasture in 1874 was too large by about 2,000 acres.

II.—*Acreage under Crops and Grass and Number*

1	2	3	4	5	6	7	8	9	10	11
			Number of Acres under Crops and Grass.						HORSES.	CATTLE.
				Whereof under						
ENGLAND. — Counties, Proper.	Population on 3rd April, 1871.	Total Area in Statute Acres.	Total under all kinds of Crops, Bare Fallow, and Grass.	Corn Crops.	Green Crops.	Clover and Artificial and other Grasses under Rotation.	Permanent Pasture, and Grass not broken up in Rotation (exclusive of Heath or Mountain Land).	Percentage of Corn Crops to Total under all kinds of Crops, Bare Fallow, and Grass.	— Number to every 100 Acres under Crops, Bare Fallow, and Grass.	— Number to every 100 Acres under Crops, Bare Fallow, and Grass.
England—										
Bedford	146,	296,	256,	117,	36,	17,	76,	45·8	4·3	13·4
Berks	196,	450,	369,	152,	60,	39,	113,	41·1	4·0	9·6
Buckingham	176,	467,	401,	137,	38,	27,	190,	34·3	4·2	17·2
Cambridge	187,	525,	483,	261,	86,	43,	76,	54·1	5·6	9·8
Chester	561,	706,	523,	85,	32,	57,	347,	16·2	3·9	31·0
Cornwall	362,	870,	525,	146,	60,	136,	163,	27·8	5·7	29·9
Cumberland	220,	970,	546,	97,	47,	100,	298,	17·7	3·5	23·0
Derby	379,	656,	502,	74,	22,	35,	363,	14·7	3·9	28·3
Devon	601,	1,655,	1,084,	292,	157,	181,	426,	26·9	4·7	20·1
Dorset	196,	627,	474,	116,	63,	55,	235,	24·4	3·2	16·1
Durham	685,	648,	409,	95,	35,	56,	202,	23·3	4·2	15·4
Essex	466,	1,055,	823,	424,	111,	73,	179,	51·5	5·0	9·6
Gloucester	535,	805,	642,	178,	68,	86,	300,	27·7	3·7	18·0
Hants	545,	1,032,	700,	262,	140,	110,	167,	37·4	4·0	8·9
Hereford	125,	533,	435,	112,	38,	40,	232,	25·8	4·7	18·6
Hertford	192,	391,	337,	152,	44,	36,	94,	45·1	4·0	9·6
Huntingdon	64,	230,	208,	103,	22,	14,	58,	49·8	4·7	12·6
Kent	848,	1,005,	726,	247,	86,	53,	290,	34·0	4·1	10·1
Lancaster	2,820,	1,208,	762,	102,	50,	73,	533,	13·4	4·5	30·3
Leicester	269,	512,	470,	111,	26,	28,	294,	23·7	3·7	29·1
Lincoln	437,	1,768,	1,474,	632,	246,	159,	417,	42·9	4·3	14·2
Middlesex	2,540,	181,	117,	19,	14,	4,	79,	16·6	5·0	24·2
Monmouth	196,	368,	232,	40,	14,	23,	149,	17·2	4·5	18·9
Norfolk	439,	1,356,	1,068,	463,	206,	162,	231,	43·3	5·5	10·2
Northampton	244,	630,	554,	188,	47,	31,	274,	33·9	3·6	21·3
Northumberland	387,	1,290,	683,	134,	60,	96,	378,	19·6	2·7	14·2
Nottingham	320,	526,	444,	165,	55,	53,	157,	37·1	4·4	17·9
Oxford	178,	470,	415,	170,	61,	41,	137,	40·9	4·0	13·2
Rutland	22,	95,	85,	28,	9,	6,	41,	32·8	3·7	20·8
Salop	248,	841,	696,	177,	65,	76,	369,	25·4	4·1	20·6
Somerset	464,	1,050,	834,	151,	70,	60,	544,	18·1	3·8	24·7
Stafford	858,	732,	594,	121,	44,	50,	367,	20·4	3·7	23·4

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* For the Irish Statistics,

of Live Stock in 1875. [000's omitted, consequently 1,256, = 1,256,000.]

12	13	14	15	16	17	18	19	20	21	22	23	24
SHEEP.	PIGS.	Number of Acres Under										
Number to every 100 Acres under Crops, Bare Fallow, and Grass.	Number to every 100 Acres under Crops, Bare Fallow, and Grass.	Wheat.	Barley or Bere.	Oats.	Beans.	Peas.	Potatoes.	Turnips and Swedes.	Mangold.	Vetches, Lucerne, and any other Crops except Clover and Grass.	Bare Fallow, and Uncropped Arable Land.	ENGLAND. — Counties, Proper.
												England—
69·7	10·8	51,	33,	9,	18,	6,	5,	13,	4,	9,	10,	Bedford
81·6	9·6	60,	43,	26,	14,	8,	1,	35,	6,	13,	6,	Berks
72·9	8·8	57,	32,	24,	17,	6,	1,	21,	5,	9,	8,	Buckingham
66·6	9·0	124,	66,	35,	26,	9,	12,	17,	19,	19,	17,	Cambridge
21·3	11·7	31,	3,	45,	4,	—	19,	8,	3,	1,	2,	Chester
83·6	10·7	50,	53,	43,	—	—	7,	31,	12,	1,	20,	Cornwall
93·7	4·5	18,	8,	70,	—	—	10,	33,	2,	—	5,	Cumberland
52·1	7·4	30,	15,	26,	2,	1,	3,	11,	2,	3,	9,	Derby
90·1	7·8	124,	79,	86,	1,	1,	17,	85,	28,	8,	27,	Devon
109·3	8·6	44,	41,	22,	4,	3,	3,	43,	5,	8,	6,	Dorset
50·7	2·8	36,	21,	34,	3,	2,	9,	22,	—	4,	20,	Durham
48·5	11·0	186,	116,	40,	48,	32,	11,	27,	32,	34,	36,	Essex
70·6	8·6	90,	45,	17,	17,	9,	6,	43,	4,	14,	10,	Gloucester
85·2	9·1	108,	70,	63,	6,	12,	5,	86,	12,	27,	18,	Hants
80·1	5·7	58,	24,	13,	11,	7,	2,	26,	2,	7,	8,	Hereford
55·8	9·1	60,	50,	25,	11,	6,	2,	26,	6,	8,	11,	Hertford
75·0	9·0	47,	27,	11,	12,	6,	4,	5,	3,	7,	10,	Huntingdon
138·7	8·0	103,	48,	52,	22,	22,	16,	30,	11,	22,	7,	Kent
41·3	5·0	33,	9,	53,	6,	—	33,	11,	2,	2,	3,	Lancaster
96·5	5·5	44,	33,	21,	7,	4,	1,	14,	5,	4,	10,	Leicester
105·5	6·8	296,	178,	95,	41,	20,	41,	137,	21,	26,	18,	Lincoln
34·3	12·0	8,	3,	5,	1,	2,	3,	2,	2,	5,	1,	Middlesex
91·4	6·2	19,	10,	8,	1,	1,	2,	9,	—	2,	5,	Monmouth
68·2	7·8	199,	198,	29,	20,	11,	5,	138,	46,	11,	6,	Norfolk
99·9	5·4	78,	59,	18,	24,	8,	2,	28,	6,	8,	14,	Northamptn.
133·8	1·9	27,	42,	58,	4,	2,	5,	49,	—	3,	15,	Northumberland
64·2	6·0	72,	51,	20,	11,	8,	6,	37,	4,	7,	15,	Nottingham
86·0	8·8	61,	56,	24,	19,	9,	1,	39,	6,	11,	6,	Oxford
124·0	3·8	10,	12,	3,	2,	1,	—	7,	—	1,	2,	Rutland
71·3	8·2	83,	53,	27,	6,	6,	5,	50,	5,	3,	10,	Salop
86·4	10·1	73,	35,	23,	17,	3,	9,	36,	11,	9,	8,	Somerset
53·4	8·6	51,	31,	31,	4,	3,	7,	27,	4,	4,	11,	Stafford

see *ante*, Table I, p. 255.

II.—*Acreage under Crops and Grass and Number of Live*

1	2	3	4	5	6	7	8	9	10	11
			Number of Acres under Crops and Grass.						HORSES.	CATTLE.
				Whereof under						
ENGLAND. — Counties, Proper.	Population on 3rd April, 1871.	Total Area in Statute Acres.	Total under all kinds of Crops, Bare Fallow, and Grass.	Corn Crops.	Green Crops.	Clover and Artificial and other Grasses under Rotation.	Permanent Pasture, and Grass not broken up in Rotation (exclusive of Heath or Mountain Land).	Percentage of Corn Crops to Total under all kinds of Crops, Bare Fallow, and Grass.	— Number to every 100 Acres under Crops, Bare Fallow, and Grass.	— Number to every 100 Acres under Crops, Bare Fallow, and Grass.
England—Contd.										
Suffolk	349,	950,	767,	394,	129,	79,	146,	51·4	5·5	8·5
Surrey	1,092,	483,	298,	100,	47,	30,	108,	33·5	4·6	15·1
Sussex	417,	934,	653,	212,	81,	65,	264,	32·5	3·9	15·4
Warwick	634,	567,	485,	151,	34,	40,	244,	31·2	3·9	19·9
Westmorland	65,	501,	239,	21,	11,	18,	190,	8·6	3·1	24·2
Wilts	257,	859,	743,	227,	108,	81,	313,	30·6	2·9	11·9
Worcester........	339,	472,	390,	125,	33,	29,	186,	32·3	4·7	15·4
York—										
East Riding (including city of York)	322,	805,	670,	281,	113,	87,	169,	41·9	5·5	12·7
North Riding	293,	1,362,	824,	221,	81,	76,	418,	26·8	4·7	19·2
West ,, ...	1,821,	1,716,	1,172,	245,	103,	85,	721,	20·9	4·2	21·1
Total for England	21,495,	32,597,	24,112,	7,529,	2,848,	2,608,	10,536,	31·2	4·3	17·5
Wales—										
Anglesey	51,	194,	146,	29,	10,	29,	77,	19·9	4·4	28·1
Brecon	60,	460,	191,	33,	8,	24,	121,	17·2	5·4	19·0
Cardigan	73,	443,	269,	64,	14,	38,	151,	24·0	4·7	22·9
Carmarthen	116,	606,	417,	71,	11,	46,	286,	17·1	4·3	25·1
Carnarvon	106,	369,	185,	23,	9,	37,	113,	12·6	4·0	27·8
Denbigh	105,	392,	254,	63,	15,	43,	131,	24·8	4·5	23·2
Flint	76,	169,	125,	34,	9,	17,	62,	27·6	4·4	23·3
Glamorgan	398,	547,	265,	37,	16,	28,	181,	14·1	4·7	19·1
Merioneth........	47,	385,	150,	18,	4,	15,	113,	11·9	3·7	26·2
Montgomery....	68,	485,	249,	55,	13,	31,	147,	22·1	5·7	27·0
Pembroke	92,	394,	294,	60,	14,	36,	181,	20·3	4·5	27·5
Radnor	25,	277,	152,	24,	8,	17,	101,	15·9	5·1	20·1
Total for Wales	1,217,	4,721,	2,696,	512,	131,	361,	1,666,	19·0	4·6	24·2
Total for Scotland	3,360,	19,496,	4,608,	1,411,	685,	1,386,	1,110,	30·6	4·0	24·8
Total for Gt. Britain	26,072,	56,815,	31,416,	9,452,	3,664,	4,354,	13,313,	30·1	4·3	1·91

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* For the Irish Statistics

Stock in 1875—*Contd.* [000's omitted, consequently 1,256, = 1,256,000.]

12	13	14	15	16	17	18	19	20	21	22	23	24
SHEEP.	PIGS.	Number of Acres Under										
Number to every 100 Acres under Crops, Bare Fallow, and Grass.	Number to every 100 Acres under Crops, Bare Fallow, and Grass.	Wheat.	Barley or Bere.	Oats.	Beans.	Peas.	Potatoes.	Turnips and Swedes.	Mangold.	Vetches, Lucerne, and any other Crops except Clover and Grass.	Bare Fallow, and Uncropped Arable Land.	ENGLAND. — Counties, Proper.
												Englnd.—Con.
62·1	14·5	147,	152,	13,	45,	29,	2,	60,	37,	25,	19,	Suffolk
33·9	11·1	42,	20,	26,	4,	7,	4,	21,	9,	10,	11,	Surrey
86·6	6·3	99,	25,	64,	9,	14,	3,	34,	11,	20,	19,	Sussex
80·9	8·4	72,	30,	16,	25,	8,	2,	20,	5,	6,	15,	Warwick
138·7	2·0	1,	2,	16,	—	—	1,	8,	—	—	—	Westmorlnd.
100·8	8·0	96,	71,	33,	14,	10,	3,	62,	5,	25,	14,	Wilts
58·8	10·0	65,	21,	8,	22,	9,	5,	15,	3,	8,	12,	Worcester
												York—
76·6	7·3	113,	72,	70,	12,	12,	10,	78,	5,	9,	19,	East Riding (including city of York)
85·4	6·4	66,	76,	63,	10,	4,	9,	60,	2,	4,	29,	North Riding
62·5	5·7	96,	77,	53,	11,	6,	25,	61,	3,	9,	16,	West ,,
79·3	7·8	3,129,	2,090,	1,422,	533,	311,	320,	1,569,	352,	410,	515,	Total for England
												Wales—
37·1	10·4	1,	6,	22,	—	—	5,	5,	—	—	—	Anglesey
244·5	4·8	9,	9,	14,	—	—	2,	6,	—	1,	4,	Brecon
76·4	7·7	9,	24,	31,	—	1,	8,	5,	1,	1,	1,	Cardigan
54·3	6·4	12,	20,	39,	—	—	5,	5,	1,	—	2,	Carmarthen
121·1	10·4	2,	8,	13,	—	—	6,	2,	1,	—	2,	Carnarvon
102·5	8·8	16,	20,	25,	1,	1,	4,	8,	1,	1,	3,	Denbigh
48·5	11·1	13,	7,	11,	2,	1,	3,	4,	1,	1,	3,	Flint
112·2	5·5	13,	11,	13,	—	—	2,	11,	1,	2,	3,	Glamorgan
255·4	6·1	2,	5,	11,	—	—	2,	1,	—	—	—	Merioneth
143·5	9·0	20,	12,	21,	—	1,	3,	9,	—	1,	3,	Montgomery
40·2	8·0	8,	27,	25,	—	—	4,	8,	1,	—	3,	Pembroke
196·0	4·1	7,	5,	12,	—	—	1,	6,	—	—	2,	Radnor
109·5	7·5	112,	154,	237,	3,	4,	45,	70,	7,	7,	26,	Total for Wales
154·1	3·3	102,	265,	1,005,	27,	2,	158,	503,	2,	15,	17,	Total for Scotland
92·8	7·1	3,342,	2,510,	2,664,	264,	316,	523,	2,143,	362,	432,	558,	Total for Gt. Britain

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see Table I, p. 255.

III.—*Number of Occupiers of Land and of Owners of Live Stock; the Average Size of each Holding in* 1875.

1	2	3	4
ENGLAND. —— Counties, Proper.	Number of Returns Obtained from		Average Acreage of each Occupier.
	Occupiers of Land.	Owners of Live Stock only.	
England—			
Bedford	4,065	1	63
Berks	4,255	37	87
Buckingham	5,689	16	70
Cambridge	7,953	7	61
Chester	14,134	43	37
Cornwall	13,919	8	38
Cumberland	7,853	11	69
Derby	13,627	24	37
Devon	18,638	23	58
Dorset	5,457	11	87
Durham	6,470	34	63
Essex	9,376	57	88
Gloucester	11,580	24	55
Hants	8,738	84	80
Hereford	7,490	6	58
Hertford	4,230	13	80
Huntingdon	3,013	14	69
Kent	11,445	180	63
Lancaster	22,627	439	34
Leicester	8,539	22	55
Lincoln	25,984	112	57
Middlesex	3,081	640	38
Monmouth	4,820	6	48
Norfolk	19,200	47	56
Northampton	7,482	9	74
Northumberland	5,614	305	122
Nottingham	8,334	9	53
Oxford	4,570	5	91
Rutland	1,362	—	63
Salop	11,649	23	60
Somerset	17,655	6	47
Stafford	14,051	138	42
Suffolk	10,672	26	72
England—Contd.			
Surrey	5,669	328	53
Sussex	9,162	43	71
Warwick	7,612	597	64
Westmorland	3,624	8	66
Wilts	7,851	6	95
Worcester	8,283	75	47
York—			
East Riding (including city of York)	8,573	33	78
North Riding	15,037	37	55
West ,,	31,309	170	37
Total for England	420,692	3,819	57
Wales—			
Anglesey	3,576	—	41
Brecon	3,271	17	58
Cardigan	5,570	2	48
Carmarthen	8,109	10	51
Carnarvon	5,446	38	34
Denbigh	5,685	17	45
Flint	4,125	20	30
Glamorgan	5,223	42	51
Merioneth	3,182	1	47
Montgomery	5,346	8	47
Pembroke	5,935	30	49
Radnor	2,244	2	68
Total for Wales	57,712	177	47
Total for Scotland	80,859	1,778	57
Total for Great Britain	559,263	5,774	56

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* See "Annual Reports" of the Registrar-General for Ireland.

Trade of United Kingdom, 1875-74-73.—*Distribution of* **Exports*** *from United Kingdom, according to the Declared Real Value of the Exports; and the Declared Real Value (Ex-duty) of* **Imports** *at Port of Entry, and therefore including Freight and Importer's Profit.*

Merchandise (*excluding Gold and Silver*) Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	Whole Years.					
	1875.		1874.		1873.	
	Imports from	*Exports to*	Imports from	*Exports to*	Imports from	*Exports to*
I.—Foreign Countries:	£	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland	33,805,	14,944,	36,238,	16,706,	35,527,	16,708,
Central Europe; viz., Germany, Holland, and Belgium	51,400,	42,198,	49,345,	45,049,	46,257,	51,084,
Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)	60,800,	21,725,	60,357,	24,847,	59,373,	25,796,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	7,912,	9,301,	6,190,	9,266,	6,724,	10,910,
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	17,926,	9,885,	17,048	11,845,	20,952,	15,000,
Northern Africa; viz., Tripoli, Tunis, Algeria and Morocco	1,626,	622,	1,444,	597,	1,550,	444,
Western Africa	1,740,	798,	1,913,	881,	1,929,	1,125,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Mooria Islands	496,	386,	362,	397,	104,	280,
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	3,118,	2,689,	2,889,	1,768,	1,985,	1,224,
South Sea Islands	118,	38,	70,	—	42,	94,
China and Japan, including **Hong Kong**	15,202,	10,995,	12,540,	9,715,	13,949,	9,979,
United States of America	69,549,	21,874,	74,109,	28,035,	71,486,	33,561,
Mexico and Central America	2,020,	1,732,	1,660,	1,383,	1,893,	1,529,
Foreign West Indies and Hayti	4,417,	4,031,	4,526,	2,972,	5,766,	4,122,
South America (Northern), New Granada, Venezuela, and Ecuador	1,235,	1,781,	1,324,	3,147,	1,483,	3,715,
,, **(Pacific)**, Peru, Bolivia, Chili, and Patagonia	9,557,	3,902,	9,537,	4,386,	10,675,	5,766,
,, **(Atlantic)** Brazil, Uruguay, and Buenos Ayres	9,971,	9,967,	9,717,	12,036,	11,348,	13,037,
Whale Fisheries; Grnlnd., Davis' Straits, Southn. Whale Fishery, & Falkland Islands	164,	20,	175,	19,	146,	—
Total—Foreign Countries	291,056,	156,888,	289,446,	173,049,	291,089,	194,374,
II.—British Possessions:						
British India, Ceylon, and Singapore	37,778,	28,291,	37,478,	27,927,	37,738,	24,568,
Austral. Cols.—N. So. W., Vict., and Queensld.	13,409,	13,239,	11,758,	12,185,	10,280,	11,808,
,, ,, So. Aus., W. Aus., Tasm., and N. Zealand	7,130,	6,243,	6,761,	6,886,	6,942,	5,830,
British North America	10,156,	9,029,	11,772,	9,413,	11,555,	8,629,
,, W. Indies with Btsh. Guiana & Honduras	7,490,	3,111,	6,406,	4,303,	6,711,	3,510,
Cape and Natal	4,487,	4,909,	4,291,	3,428,	4,138,	4,338,
Brt. W. Co. of Af., Ascension and St. Helena	609,	789,	608,	383,	479,	727,
Mauritius	822,	354,	1,042,	546,	1,298,	582,
Channel Islands	693,	641,	663,	816,	560,	707,
Total—British Possessions	82,574,	66,606,	80,779,	66,387,	79,701,	60,699
General Total £	373,630,	223,494,	370,225,	239,436,	370,790,	255,073,

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* *i.e.*, British and Irish produce and manufactures.

IMPORTS.—(United Kingdom.)—**Whole Years, 1875-74-73-72-71.**—*Declare Real Value (Ex-duty), at Port of Entry (and therefore including Freight and Importer's Profit), of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.*

(Whole Years.) - - [000's omitted.] FOREIGN ARTICLES IMPORTED.		1875.	1874.	1873.	1872.	1871.
		£	£	£	£	£
RAW MATLS.—*Textile*, &c.	Cotton Wool	46,320,	50,937,	54,887,	53,617,	55,567,
	Wool (Sheep's) ..	22,889,	22,640,	20,699,	19,862,	19,565,
	Silk*....................	10,546,	15,713,	15,519,	14,501,	16,065,
	Flax	4,380,	5,545,	5,295,	4,998,	5,791,
	Hemp	2,246,	2,211,	2,319,	6,266,	6,480,
	Indigo	1,621,	2,153,	2,438,	2,479,	907,
		88,002,	99,199,	101,157,	101,723,	104,575,
" " *Various.*	Hides	7,005,	6,815,	6,673,	6,733,	5,001,
	Oils	5,368,	4,778,	5,556,	4,649,	5,093,
	Metals	12,685,	11,109,	10,991,	9,207,	9,463,
	Tallow	2,037,	2,318,	3,133,	2,835,	3,112,
	Timber................	15,362,	21,831,	19,665,	15,753,	12,081,
		42,457,	46,851,	45,018,	37,177,	34,749,
" " *Agrcltl.*	Guano	1,292,	1,342,	2,112,	1,183,	1,994,
	Seeds	8,789,	7,470,	7,129,	7,278,	8,106,
		10,081,	8,812,	9,241,	8,461,	10,100,
TROPICAL, &c., PRODUCE.	Tea	14,167,	11,573,	11,539,	12,982,	11,658,
	Coffee	7,605,	7,103,	7,319,	5,295,	5,407,
	Sugar & Molasses	21,917,	16,083,	21,436,	18,490,	18,572,
	Tobacco	2,987,	3,875,	4,003,	2,801,	3,705,
	Rice	2,991,	3,622,	3,238,	3,474,	2,321,
	Fruits	3,789,	3,349,	3,051,	3,916,	3,247,
	Wines	6,821,	6,868,	8,304,	7,722,	7,070,
	Spirits	2,885,	2,612,	3,297,	2,192,	2,896,
		63,162,	55,085,	62,188,	56,872,	54,876,
FOOD	Grain and Meal.	52,714,	50,753,	51,521,	50,987,	42,404,
	Provisions	25,752,	25,868,	23,812,	18,912,	18,219,
		78,466,	76,621,	75,333,	69,899,	60,623,
Remainder of Enumerated Articles		52,973,	45,594,	42,144,	44,283,	36,956,
TOTAL ENUMERATED IMPORTS		335,141,	332,162,	335,081,	318,415,	302,879,
Add for UNENUMERATED IMPORTS (say)		38,800,	36,273,	35,300,	34,960,	24,955,
TOTAL IMPORTS		373,941,	368,435,	370,381,	353,375,	327,834,

* "Silk," inclusive of manufactured silk, "not made up."

EXPORTS.—(United Kingdom.)—**Whole Years, 1875-74-73-72-71.**—*Declared Real Value, at Port of Shipment, of Articles of* BRITISH *and* IRISH *Produce and Manufactures Exported from United Kingdom.*

(Whole Years.) [000's omitted.] BRITISH PRODUCE, &c., EXPORTED.		1875.	1874.	1873.	1872.	1871.
		£	£	£	£	£
MANFRS.—*Textile.*	Cotton Manufactures..	58,565,	59,716,	61,447,	63,419,	57,636,
	,, Yarn	13,170,	14,516,	15,876,	16,710,	15,055,
	Woollen Manufactures	21,649,	22,795,	25,279,	32,384,	27,185,
	,, Yarn	5,102,	5,559,	5,404,	6,110,	6,102,
	Silk Manufactures........	1,738,	2,100,	1,876,	2,189,	2,054,
	,, Yarn	878,	1,030,	1,688,	1,895,	1,270,
	Linen Manufactures	7,271,	7,124,	7,295,	8,248,	7,521,
	,, Yarn	1,855,	1,721,	1,976,	2,142,	2,220,
		110,228,	114,561,	120,821,	133,097,	119,043,
,, *Sewed.*	Apparel	3,185,	3,197,	3,434,	3,095,	2,699,
	Haberdy. and Mllnry.	4,922,	6,131,	6,598,	6,629,	5,920,
		8,107,	9,328,	10,032,	9,724,	8,619,
METALS, &c.	Hardware	4,265,	4,413,	4,938,	5,089,	4,022,
	Machinery	9,099,	9,771,	9,994,	8,199,	5,942,
	Iron	25,781,	31,225,	37,780,	36,061,	26,149,
	Copper and Brass........	3,730,	3,814,	3,821,	3,626,	3,268,
	Lead and Tin	1,300,	1,648,	1,548,	1,760,	1,623,
	Coals and Culm	9,646,	11,954,	13,206,	10,444,	6,267,
		53,821,	62,825,	71,287,	65,179,	47,271,
Ceramic Manufcts.	Earthenware and Glass	2,812,	3,152,	3,408,	3,113,	2,610,
Indigenous Mnfrs. and Products.	Beer and Ale...............	2,090,	2,451,	2,420,	2,085,	1,871,
	Butter	240,	256,	266,	307,	328,
	Cheese	88,	82,	81,	83,	96,
	Candles	177,	187,	221,	223,	181,
	Salt..............................	676,	663,	789,	529,	468,
	Spirits	277,	152,	212,	224,	201,
	Soda	2,300,	2,602,	2,931,	—	1,753,
		5,848,	6,393,	6,920,	3,451,	4,898,
Various Manufcts.	Books, Printed	915,	899,	913,	883,	723,
	Furniture	—	—	—	—	—
	Leather Manufactures	382,	3,547,	3,417,	3,664,	3,662,
	Soap	311,	277,	241,	304,	236,
	Plate and Watches	304,	285,	278,	232,	192,
	Stationery	684,	688,	673,	661,	532,
		2,596,	5,696,	5,522,	5,744,	5,345,
Remainder of Enumerated Articles		22,882,	20,321,	19,433,	19,855,	18,149,
Unenumerated Articles...............................		17,200,	17,160,	17,650,	15,798,	13,384,
TOTAL EXPORTS.....................		223,494,	239,436,	255,073,	255,961,	219,319,

SHIPPING.—(United Kingdom.)—*Account of Tonnage of Vessels Entered and Cleared with Cargoes, from and to Various Countries, during the* Twelve Months *ended December*, 1875-74-73.

Countries from whence Entered and to which Cleared.	Total British and Foreign.					
	1875.		1874.		1873.	
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.
Foreign Countries.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Russia Northern ports	1,268,269	847,974	1,484,558	868,530	1,225,967	714,998
Russia Southern ,,	432,482	165,318	286,789	157,402	374,773	140,386
Sweden	1,028,487	681,778	1,224,786	633,372	1,139,312	564,527
Norway	663,194	434,617	793,966	378,949	868,147	328,641
Denmark	199,687	630,654	157,159	567,215	156,698	513,887
Germany	1,483,464	2,369,927	1,548,523	2,250,688	1,639,472	2,112,711
Holland	1,083,359	1,106,300	860,646	998,532	842,800	1,103,986
Belgium	852,447	972,947	820,140	865,604	822,867	939,261
France	1,880,874	2,744,622	1,704,388	2,438,363	1,639,472	2,552,079
Spain	650,930	610,563	751,430	526,838	921,501	544,143
Portugal	266,612	323,316	271,685	299,272	319,094	301,604
Italy	314,391	895,909	226,713	809,919	224,569	719,402
Austrian territories	40,820	87,624	28,933	93,021	25,980	103,213
Greece	121,756	75,676	120,133	79,295	108,831	76,652
Turkey (including Wallachia and Moldavia)	308,436	303,283	253,817	337,797	317,516	317,350
Egypt	312,275	479,024	255,226	527,758	370,547	519,300
United States of America	3,264,668	1,996,751	3,510,184	2,102,736	3,017,868	2,340,100
Mexico, Foreign West Indies, and Central America	307,849	462,037	294,291	441,245	315,350	435,483
Brazil	247,406	468,724	213,386	517,697	229,349	490,793
Peru	244,955	113,272	218,510	119,841	273,525	163,004
Chili	65,943	289,763	96,679	289,922	84,045	247,567
China	136,815	32,675	102,999	22,243	119,529	19,512
Other countries	546,129	593,884	477,487	647,084	525,558	592,741
Total, Foreign Countries	15,721,248	16,686,638	15,702,428	15,973,323	15,562,770	15,841,340
British Possessions.						
North American Colonies	1,240,334	607,039	1,500,419	706,450	1,326,235	603,274
East Indies, including Ceylon, Singapore, and Mauritius	1,096,454	1,437,812	985,093	1,374,761	983,968	1,175,067
Australia and New Zealand	262,822	595,783	246,069	568,603	267,292	467,582
West Indies	252,459	167,021	203,399	133,500	211,682	162,060
Channel Islands	248,772	167,783	233,005	158,541	236,513	161,651
Other possessions	205,738	753,836	212,304	835,363	203,503	731,693
Total, British Possessions	3,306,579	3,729,274	3,380,289	3,777,218	3,229,193	3,301,32
Total Foreign Countries and British Possessions.						
Twelve months ended December 1875	19,027,827	20,415,912	—	—	—	—
Twelve months ended December '74	—	—	19,082,717	19,750,541	—	—
Twelve months ended December '73	—	—	—	—	18,791,963	19,142,667

GOLD AND SILVER BULLION AND SPECIE.—IMPORTED AND EXPORTED.—(United Kingdom.)—*Declared Real Value for the* **Whole Years, 1875-74-73.**

[000's omitted.]

(Whole Years.)	1875.		1874.		1873.	
	Gold.	*Silver.*	Gold.	*Silver.*	Gold.	*Silver.*
Imported from—	£	£	£	£	£	£
Australia	6,641,	33,	6,721,	21,	9,444,	27,
So. Amca., including Mexico and W. Indies	1,644,	3,432,	2,864,	3,996,	3,123,	3,058,
United States	8,258,	3,181,	4,509,	3,477,	3,174,	5,992,
	16,543,	6,646,	14,094,	7,494,	15,741,	9,077,
France	2,023,	1,392,	740,	1,172,	1,509,	1,342,
Germany, Holl. & Belg.	699,	1,226,	282,	2,771,	253,	527,
Prtgl., Spain, and Gbrltr.	120,	48,	80,	76,	138,	70,
Mlta., Trky., and Egypt	657,	26,	274,	26,	2,309,	36,
China, including Hong Kong	342,	112,	283,	372,	129,	500,
West Coast of Africa	117,	24,	136,	41,	78,	7,
All other Countries	2,599,	649,	2,192,	346,	454,	1,436,
Totals Imported	23,100,	10,123,	18,081,	12,298,	20,611,	12,988,
Exported to—						
France	5,341,	2,424,	5,434,	1,322,	632,	3,564,
Germany, Holl. & Belg.	8,687,	447,	1,137,	964,	7,696,	1,479,
Prtgl., Spain, and Gbrltr.	1,223,	1,695,	359,	1,895,	3,243,	488,
	15,251,	4,566,	6,930,	4,181,	11,571,	5,531,
Ind. and China (*viâ* Egypt)	78,	4,064,*	—	6,707,	—	3,108,
United States	577,	89,	9,	25,	2,417,	2,
South Africa	—	15,	11,	21,	217,	45,
So. Amca., including Mexico and W. Indies	1,961,	57,	1,877,	108,	928,	106,
All other Countries	943,	115,	1,814,	1,169,	3,938,	1,036,
Totals Exported	18,810,	8,906,	10,641,	12,211,	19,071,	9,828,

* This entry is now shown direct, instead of to Egypt as formerly.

REVENUE.—(UNITED KINGDOM.)—31ST DECEMBER, 1875-74-73-72.

Net Produce in QUARTERS *and* YEARS *ended* 31*st* DEC., 1875-74-73-72.

[000's omitted.]

QUARTERS, ended 31st Dec.	1875.	1874.	1875.		Corresponding Quarters.	
			Less.	More.	1873.	1872.
	£	£	£	£	£	£
Customs	5,506,	5,360,	—	146,	5,579,	5,739,
Excise	7,133,	7,077,	—	56,	6,862,	6,409,
Stamps	2,795,	2,603,	—	192,	2,666,	2,549,
Taxes	39,	48,	9,	—	24,	26,
Post Office	1,511,	1,470,	—	41,	1,240,	1,180,
Telegraph Service	330,	300,	—	30,	291,	260,
	17,314,	16,858,	9,	465,	16,602,	16,163,
Property Tax	211,	251,	40,	—	271,	373,
	17,525,	17,109,	49,	465,	16,873,	16,536,
Crown Lands	136,	136,	—	—	135,	120,
Miscellaneous	1,102,	1,059,	—	43,	757,	825,
Totals	18,763,	18,304,	49,	508,	17,765,	17,481,
			NET INCR. £459,			

YEARS, ended 31st Dec.	1875.	1874.	1875.		Corresponding Years.	
			Less.	More.	1873.	1872.
	£	£	£	£	£	£
Customs	19,740,	19,393,	—	347,	20,740,	20,751,
Excise	27,857,	27,368,	—	489,	26,562,	25,324,
Stamps	10,878,	10,458,	—	420,	10,472,	9,872,
Taxes	2,456,	2,438,	—	18,	2,357,	2,359,
Post Office	5,933,	5,750,	—	183,	5,532,	4,860,
Telegraph Service	1,170,	1,259,	89,	—	1,131,	905,
	—	66,666,	89,	1,457,	66,794,	64,071,
Property Tax	3,921,	5,466,	1,545,	—	6,831,	9,636,
	—	72,132,	1,634,	1,457,	73,625,	73,707,
Crown Lands	395,	381,	—	14,	390,	375,
Miscellaneous	4,025,	3,992,	—	33,	3,698,	3,607,
Totals	76,375,	76,505,	1,634,	1,504,	77,713,	77,689
			NET DECR. £130,			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 31ST DEC., 1875:—

An Account showing the REVENUE *and other* RECEIPTS *in the* QUARTER *ended* 31*st December*, 1875; *the* ISSUES *out of the same, and the Charges on the Consolidated Fund at that Date, and the Surplus or Deficiency of the Balance in the Exchequer on the* 31*st of December*, 1875, *in respect of such Charges.*

Received:—

		£
Income received, as shown in Account I		18,763,167
Amount raised for Local Loans, by Exchequer Bonds		750,000
Amount received in Repayment of Advances for Public Works, &c.		614,184
,, for Greenwich Hospital		29,000
Total		£20,156,351
Excess of the Sums charged on the Consolidated Fund on the 31st of December, 1875, payable in March quarter, 1876, above the Balance in the Exchequer at that date, viz.:—		
Excess of Charge in Great Britain	£5,833,043	
Surplus over Charge in Ireland	903,224	
Net deficiency		*4,929,819
		25,086,170

Paid:—

		£
Net deficiency of the balance in the Exchequer to meet the charge on the 30th of September, 1875, as per last account		3,771,020
Amount applied out of the Income to *Supply Services*		11,322,346
,, advanced for Greenwich Hospital		29,000
Charge of the *Consolidated Fund* on the 31st of December, 1875, viz.:—		
Interest of the Permanent Debt	£6,056,132	
Terminable Annuities	2,249,844	
Interest of Exchequer Bills	40,268	
,, of Deficiency Advances	3,668	
		8,349,912
Other Consolidated Fund Charges:—		
The Civil List	101,553	
Other Charges on Consolidated Fund	304,504	
Principal of Exchequer Bills	200	
Advances for Public Works, &c.	1,207,635	
		1,613,892
Total		£25,086,170

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* Charge on 31st December, 1875 (as above)	£9,963,804
Paid out of Growing Produce in December quarter, 1875	1,393,379
Portion of the Charge payable in March quarter, 1876	8,570,425
To meet which there was in the Exchequer on the 31st of December, 1875	3,640,606
Net deficiency as above	4,929,819

BRITISH CORN.—*Gazette Average Prices* (ENGLAND AND WALES), *Fourth Quarter of* 1875.

[This Table is communicated by the Statistical and Corn Department, Board of Trade.]

Weeks ended on Saturday.	Weekly Average. (Per Impl. Quarter.)					
	Wheat.		Barley.		Oats.	
1875.	s.	d.	s.	d.	s.	d.
October 2	45	11	36	4	26	5
„ 9	45	10	36	2	24	11
„ 16	46	–	36	10	24	–
„ 23	46	8	37	7	24	4
„ 30	47	4	38	1	24	6
Average for October	46	4	37	–	24	10
November 6	47	6	38	3	24	5
„ 13	47	8	38	7	25	9
„ 20	47	–	38	3	25	8
„ 27	46	8	36	10	26	5
Average for November	47	2	37	11	25	6
December 4	46	7	36	1	25	1
„ 11	46	1	35	4	24	9
„ 18	46	7	35	4	24	10
„ 25	45	9	34	9	23	4
Average for December	46	3	35	4	24	6
Average for the quarter	46	7	36	9	24	11
„ year	45	1	38	5	28	8

BANK OF ENGLAND.—WEEKLY RETURN.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), *for Wednesday in each Week, during the* FOURTH QUARTER (*October—December*) *of* 1875.

[0,000's omitted.]

1	2	3	4	5	6	7	
ISSUE DEPARTMENT.					COLLATERAL COLUMNS.		
Liabilities.		Assets.					
Notes Issued	DATES. (Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.	Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.	
£ Mlns.	1875.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1875.	Per cnt.
40,82	Oct. 6	11,02	3,98	25,82	28,98	7 Oct.	2½
39,41	,, 13	11,02	3,98	24,41	29,23	14 ,,	3½
36,63	,, 20	11,02	3,98	23,63	26,82	21 ,,	4
38,28	,, 27	11,02	3,98	23,28	28,27		
37,91	Nov. 3	11,02	3,98	22,91	28,65		
37,55	,, 10	11,02	3,98	22,55	28,16		
37,60	,, 17	11,02	3,98	22,60	27,75	18 Nov.	3
37,38	,, 24	11,02	3,98	22,38	27,36		
37,52	Dec. 1	11,02	3,98	22,52	27,61		
37,24	,, 8	11,02	3,98	22,24	27,24		
37,34	,, 15	11,02	3,98	22,34	26,96		
36,88	,, 22	11,02	3,98	21,88	27,12		

BANKING DEPARTMENT.

8	9	10	11	12	13	14	15	16	17	18
Liabilities.						Assets.				Totals of Liabilities and Assets.
Capital and Rest.		Deposits.		Seven Day and other Bills.	DATES. (Wdnsdys.)	Securities.		Reserve.		
Capital.	Rest.	Public.	Private.			Government.	Other.	Notes.	Gold and Silver Coin.	
£ Mlns.	£ Mlns.	£ Mlns	£ Mlns.	£ Mlns.	1875.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
14,55	3,07	4,79	25,65	,42	Oct. 6	16,27	19,84	11,84	,53	48,48
14,55	3,10	4,13	26,05	,44	,, 13	16,55	20,93	10,17	,62	48,27
14,55	3,11	3,72	24,03	,43	,, 20	15,27	20,31	9,81	,45	45,83
14,55	3,11	3,57	21,90	,40	,, 27	13,19	19,69	10,01	,63	43,52
14,55	3,10	3,31	21,21	,39	Nov. 3	12,75	19,96	9,26	,64	42,57
14,55	3,10	3,22	20,21	,39	,, 10	11,81	19,64	9,39	,63	41,48
14,55	3 10	3,42	20,74	,36	,, 17	12,31	19,30	9,85	,73	42,18
14,55	3,12	3,59	20,86	,34	,, 24	12,51	19,10	10,02	,82	42,46
14,55	3,06	3,88	22,68	,43	Dec. 1	13,85	20,05	9,91	,79	44,60
14,55	3,07	4,65	21,02	,36	,, 8	13,85	19,00	10,00	,79	43,65
14,55	3,07	5,70	20,61	,38	,, 15	13,87	19,17	10,38	,89	44,39
14,55	3.07	6,32	18,78	,31	,, 22	13,87	18,65	9,76	,75	43,04

LONDON CLEARING; CIRCULATION, PRIVATE AND PROVINCIAL.

The London Clearing, and the Average Amount of Promissory Notes in Circulation in ENGLAND *and* WALES *on Saturday in each Week during the* FOURTH QUARTER *(October—December) of* 1875; *and in* SCOTLAND *and* IRELAND, *at the Four Dates, as under.*

[0,000's omitted.]

ENGLAND AND WALES.					SCOTLAND.				IRELAND.		
DATES. *Saturday.*	*London:* Cleared in each Week ended *Wednesday.**	Private Banks. (Fixed Issues, 3,80).	Joint Stock Banks. (Fixed Issues, 2,65).	TOTAL. (Fixed Issues, 6,46).	Weeks ended	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 2,74).	£5 and upwards	Under £5.	TOTAL. (Fixed Issues, 6,35).
1875.	£	£	£	£	1875.	£	£	£	£	£	£
Oct. 2	105,86	2,59	2,37	4,97	Oct. 2	2,04	4,05	6,09	3,89	3,24	6,35
„ 9	110,54	2,70	2,42	5,13							
„ 16	111,22	2,73	2,43	5,17							
„ 23	95,83	2,68	2,38	5,07							
„ 30	82,01	2,65	2,35	5,00	„ 30	2,13	4,10	6,23	4,52	3,71	8,23
Nov. 6	129,19	2,66	2,38	5,04							
„ 13	95,11	2,63	2,37	5,00							
„ 20	118,35	2,58	2,34	4,92							
„ 27	81,65	2,54	2,30	4,85	Nov. 27	2,46	4,42	6,88	4,47	3,75	8,22
Dec. 4	129,72	2,50	2,27	4,77							
„ 11	88,23	2,46	2,26	4,72							
„ 18	113,51	2,40	2,25	4,65							
„ 25	93,76	2,44	2,24	4,69	Dec. 25	2,17	4,10	6,27	4,26	3,70	7,96

* The Wednesdays *preceding* the Saturdays.

FOREIGN EXCHANGES.—*Quotations as under,* LONDON *on Paris, Hamburg and Calcutta;—and New York, Calcutta, Hong Kong and Sydney, on* LONDON.

1	2	3	4	5	6	7	8	9
				Calcutta.				
DATES.	London on Paris. 3 m.d.	London on Hamburg. 3 m.d.	New York. 60 d. s.	Indian Council Drafts. On demand.	Calcutta on London Credit Bills. 6 m. s.	Hong Kong. m. d.	Sydney. 30 d. s.	Standard *Silver* in bars in London. pr. oz.
1875.			per. cnt.	*d.*	*d.*	*d.*	per cnt.	*d.*
Oct. 9	25·50	20·67	4·87$\frac{1}{2}$	21$\frac{13}{16}$	22$\frac{7}{16}$	49	$\frac{1}{2}$ dis.	57
„ 23	25·52$\frac{1}{2}$	20·66	4·78	21$\frac{3}{4}$	22$\frac{3}{8}$	—	—	57
Nov. 6	25·52$\frac{1}{2}$	20·65	4·81	21$\frac{3}{4}$	22$\frac{1}{4}$	—	—	56$\frac{15}{16}$
„ 20	25·50	20·62	4·84$\frac{1}{2}$	21$\frac{1}{2}$	22$\frac{1}{8}$	—	—	56$\frac{5}{8}$
Dec. 4	25·45	20·61	4·83$\frac{1}{2}$	21$\frac{7}{16}$	22	—	$\frac{1}{2}$ dis.	56$\frac{5}{8}$
„ 18	25·45	20·65	4·85$\frac{1}{2}$	21$\frac{7}{16}$	21$\frac{15}{16}$	48$\frac{7}{8}$	$\frac{1}{2}$ dis.	—

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Vol. XXXIX.] [Part II.

JOURNAL OF THE STATISTICAL SOCIETY,

JUNE, 1876.

On the PRINCIPLES *which* REGULATE *the* RATE *of* INTEREST *and on the* CURRENCY LAWS.

By ROBERT BAXTER, ESQ.

[Read before the Statistical Society, 18th January, 1876.]

CONTENTS:

	PAGE
I.—Increased Amount of Deposits in Banks	278
II.—Growth of Trade compared with Deposits	278
III.—Excess of Capital for Discount	279
IV.—Remedial Principles	279
V.—Foreign Disturbing Forces	280
VI.—Action of Bank of England in Raising Interest on Foreign Demand for Gold	280
VII.—This Action Induced by the Bank of England being made Manager of the Currency of the Kingdom	283
VIII.—Effect of our Currency Law of 1844	285
IX.—The Rate of Interest ought not to be thus Raised	286
X.—Effect of a Panic upon the Rate of Interest and on the Currency Laws	287
XI.—Remedial Measures	289
XII.—The Rate of Interest should be Fixed by a Council of Bankers	290

PUBLIC inquiry has been of late strongly directed to the reasons for the very low rate of interest upon loanable capital in the year 1875, the more especially as ten years ago the very high rates then prevailing created equal surprise.

For four years preceding 1866 the average rate was 6 per cent.; for four years preceding 1875 only 4 per cent.; for the single year 1866 it was 7; for the year 1875 under 3 per cent.; and was sinking under $2\frac{1}{2}$ before the bank began to raise the rate to prevent the efflux of bullion.

In pursuing this inquiry, we must remember that permanent loans, such as mortgages, stand on a different footing to temporary advances by way of discount. The first vary with great slowness; the latter change rapidly from month to month; sometimes, alas, from week to week.

The principles which (excluding foreign forces) regulate the rate are the common ones of supply and demand. If the supply of capital exceeds the demand, interest will fall; if the demand for loans exceed the supply, interest will rise.

Confining ourselves to the sources of the supply of capital for discount, we find this furnished by the deposits left at call in the banks of the kingdom which is wholly employed in discounting or other temporary loans.

I.—*Increased Amount of Deposits in Banks.*

The habit of placing capital at interest on deposits in banks is of recent but of very rapid growth; apparently induced by the rate of interest on discounts being higher than those of permanent loans, whilst the depositor retains the advantage of speedily withdrawing his money should he meet with a tempting investment.

	Millions.
In 1844 the deposits in the whole kingdom were estimated not to exceed	70
In 1856 they had grown to	200
" '66 to	350
" '72, as calculated by Mr. Palgrave, including the capitals of the banks themselves, to upwards of	800

At which they are now supposed to stand.

The marvel is, how such masses of capital so rapidly thrown into this new sphere could find employment; but the very growth of the deposits shows they were not only actually but profitably employed. The various banks allow interest upon them up to 1 per cent. below the bank rate, and generally charge their customers 1 per cent. above it; but these banks, if they had not been able to employ them would have refused the deposits altogether.

The mode of employment on discounts and temporary advances shows that these deposits are employed in trade; in fact, as capital for those engaged in trade. In the place of the old plan of merchants finding their own permanent capital, it is now aided by advances from banks by the discount of bills. So long as the adventure was temporary, and the capital speedily returned, the transaction was legitimate; but if resorted to as a means of providing permanent capital it is obviously an unwarrantable step, and attended with great perils.

II.—*Growth of Trade compared with Deposits.*

The growth of the trade of the kingdom must have been nearly commensurate with the extended supply of deposits, although the capital might be expected to outrun the trade; and as we measure our trade by the amount of our exports and imports (which is a very fair criterion), we find:—

	Millions.
In 1844, when the deposits were	70
„ the exports and imports were	134
Deposits reaching one-half the amount of trade.	
In 1856, deposits	200
„ exports and imports	312
Deposits about two-thirds of trade.	
In 1866, deposits	350
„ exports and imports	490
Deposits about three-quarters of trade.	
In 1874, deposits	800
„ exports and imports	685
Deposits about one-seventh beyond trade.	

III.—*Excess of Capital for Discount.*

The tendency is thus seen to be that the supply of capital exceeds the growth of trade, and presents for discount more than trade will absorb. At the same time it will probably be found that from the facilities of discount this mode of supplying capital may supplant some of the old permanent capital in a greater ratio than the actual increase of trade.

It must be remarked also that in the past year the activity of trade has slackened, whilst the extensive failure of some large discount operators and of firms who were unduly leaning on discounts has alarmed the banks, restricted discounts, and induced a plethora of capital.

From these causes it is that money is exceptionally cheap, and interest unusually low; but if left to itself, the money market would gradually recover its equilibrium and interest rise to its medium standard.

IV.—*Remedial Principles.*

The prevalence of low rates will compel the banks to reduce their allowance to depositors, and this will lead to the withdrawal of deposits, which will seek the higher interest derivable from permanent loans or investments, and so soon as the supply of money for discount sinks under the demand for discounting the rate of interest will rise.

A revival of greater activity in trade will also increase the demand for discounts as the present depression has reduced it.

We may be confident, therefore, that in spite of the extraordinary inflation of the deposits and the unsound use of discounts instead of permanent capital, the rate of interest (if relieved from other disturbing forces) would recover itself, and be soundly regulated by the natural law of supply and demand.

The healthy friction of competing applicants at one time for the discount of bills, and at another for bills to discount, will gradually vary the rate of interest upwards or downwards according to the state of the market, and needs no intervention of a third power to fix the rate, although for other purposes, such as the allowance of interest on deposits and the charge on cash advances by banks, it is desirable some authority should be recognised from time to time to fix a uniform rate for the kingdom.

V.—*Foreign Disturbing Forces.*

All these happy anticipations of the smooth and sound working of the law of supply and demand are rudely brushed aside by two disturbing forces arising out of the infirmity of our currency laws:—

The one, a foreign demand for gold.
The other, a money market panic.

VI.—*Action of Bank of England in Raising Interest on Foreign Demand for Gold.*

As we read the public money market reports, we find the reasons given for a change in the rate of interest are in nine cases out of ten not grounded on the principle of supply and demand, but entirely and simply on the call for bullion from abroad. So soon as a drain of gold sets in to supply the wants of foreign states, the Bank of England raises the rate of interest avowedly to stop the outflow.

The principle upon which this is done is that gold is supposed to go away because money is cheaper here than abroad, and because capital is flowing out to get to a more profitable market, and the hope is that by raising interest, money is made dearer in this country and will cease to go away in gold. But in the majority of cases this is a mere fallacy. Gold goes away when the balance of trade or of investments is against us which we must pay in gold, or when foreign countries need gold for special purposes, such as the new German coinage for a gold standard.

In the eventualities of trade or of foreign demands, there are in every year drains of gold from this country which the course of trade brings back to us. They are always occurring without being caused by money sinking to a less value here than it bears abroad, always excepting the periodical variation of our exchanges, when we have to pay a balance of trade in gold. On such occasions the money constituting such balance is of less value here than in the country to which we have to send it, and we pay the cost of transmitting gold beyond the nominal value of the money in this country.

These drains measured on our actual experience from 1844 to 1866, being twenty-two years, have been—

Only twice to the extent of	8 mlns.
Also twice	6 ,,
,, once	5 ,,
,, thrice above	3 ,,
,, seven times over	2 ,,
,, ,, under	2 ,,

The amounts thus withdrawn from our country to supply foreign demands, compared with the 800 millions of floating capital with which we trade, seem so insignificant, that we are amazed at the nervousness with which the Bank of England regards a call for bullion, and the spasmodic earnestness with which it raises the rate of interest to stop it.

A rise in the rate of interest, if it is to be effectual, must pervade our whole available capital, say of 800 millions. One per cent. continued for a year is equal to 8 millions, the extent of the largest drain. For three months even our trade would pay on an advance of 1 per cent. 2 millions as the cost of sending 8 millions of bullion abroad.

We ought to be so supplied with bullion that a call from abroad for 3 or 4 million might be answered by sending the amount without any disturbance of our finance, and without the necessity of raising the rate of interest. All experience shows us gold will go abroad at certain intervals, and will return in like manner. Wholly to prevent it is impossible, and it should, therefore, be regarded not as an exceptional but as a regular occurrence. If from any exceptional circumstances the call should be excessive, it must be met by exceptional measures, but a call confined to a few millions ought to be allowed without any interference with our course of trade.

It is, however, a happy thing for the country that this system of raising the rate of interest to stop the export of bullion is at last exploding. Within the past year the bank raised the rate, but the general market would not follow. The bank proceeded (incredible as it seems) to try to raise the general market by themselves, borrowing, so as to absorb the floating cash, and create an artificial scarcity, an operation so entirely foreign to the proper objects of their incorporation, and so certain to fail upon the extended money market of England, that it is no wonder the bank was obliged to accept a defeat, and confess itself unable to control the rate of interest.

The following extract from the "Economist" of 23rd October, 1875, shows the operation:—

"Yesterday the bank rate was raised from 3½ to 4 per cent., "making the third change within three weeks, and causing a rise "altogether from 2 to 4 per cent., the most important jump being "that of last week from 2½ to 3½ per cent. The change has been "exclusively made in view of the bullion drain in progress, and "which has resulted this week in the absence of any arrivals of "importance from abroad, in a total withdrawal since the previous "return of 682,000*l.*, for export. The scarcity of bills, however, "continues, and the utmost difficulty has been found in employing "money, several of the leading discount houses up to yesterday "refusing to give more than 1 or 1½ per cent. for new money. In "these circumstances the bank directors, in anticipation of, and "subsequent to, the present change, have been borrowing on "stock and exchequer bills, so as to obtain control of the market. "A very large amount has been so borrowed, and short money is "accordingly firmer since yesterday, at 2½ to 3 per cent. on English "Government securities at call. But the minimum discount rate on "three months' bank bills, after advancing yesterday, has since fallen "back to about last week's rate, or 3⅜, and there is still no pressure "of demand."

On 30th October the "Economist" says:—

"Apparently the bank has continued during the week its "operation of borrowing on stock, though without apparent "effect."

Although the bank rate was raised to 4 per cent., bank bills for two or three months in the general market continued to be discounted at 3 per cent.

On 13th November not more than 3 per cent. was got on six months' bank bills, and on the 17th November the bank reduced its rate to 3 per cent.

In 1844, when the Bank of England held perhaps one fourth of the whole deposits of the kingdom, and was the chief banking establishment of the metropolis, it could reasonably control the market, and when the bank raised the rate of interest all other banks would follow. But now, when the Bank of England holds less than one-thirtieth of the deposits of the kingdom, and in the extent of its business is exceeded by half a dozen other banks in the metropolis, its position is so far changed that its commanding influence is gone, and its dictum of the scale of interest will no longer control the market.

The bank is absolute within its own walls, and whenever it becomes advisable to restrict its own operations by raising the rate of interest it can do so. All the other banks of the kingdom whose trade is to make interest on loans of money will welcome an increased rate if they can get it from their customers, and it so happens that when discounts are equal to the capital offered, the customers renewing their bills must pay the advanced price. But the allowance by bankers to their customers on deposits advances with the rate of interest, and if at the advanced rate they cannot employ their deposits, they will not adopt it. This is what has now happened, and the bank rate is practically discarded.

It would be incredible if it had not happened that banks wielding a loanable capital of 800 millions should allow one single member of their body to dictate the rate of interest for the whole kingdom—a bank too, which, though in some measure considered the state bank, does far less business than half a dozen of its competitors.

VII.—*This Action Induced by the Bank of England being made Manager of the Currency of the Kingdom.*

The reason of this anomalous state of things lies in the currency laws of the kingdom, which have constituted the Bank of England chief manager, and dangerously responsible for the currency.

Our currency consists of a mixed circulation of gold and bank notes, to which the habits of trade have added cheques and bills of exchange.

It is generally computed, although we have no definite details to guide us, that our gold circulation unconnected with the deposit of bullion is 100 millions.

Our note circulation of Bank of England and country notes is known to be generally 44 millions.

The amount of cheques passing through the bankers' clearing house is about 17 millions daily. But a considerable quantity of cheques do not pass through it. Moreover, many cheques are endorsed on and so do double service. We may safely state the cheque currency at 25 millions.

So doing we treat cheques not endorsed on as currency for one day only.

The bills of exchange (generally endorsed) cannot easily be calculated. The yearly amount of inland bills is estimated by Mr. Palgrave at near 700 millions, which, if we reckoned them as currency for one day (if without endorsement) would represent 2 millions, or for double as once endorsed, as equal to 4 millions of bank notes which pass daily from hand to hand, say 4 millions.

The foreign bills are estimated by Mr. Palgrave at about half the amount of inland bills, and we therefore set them down at 2 millions, making an aggregate of 175 millions which does duty as currency for the entire capital of the country.

The distinction between currency and capital must be carefully borne in mind. Capital is not currency, and our 800 millions of capital convey no measure of our currency. Currency is simply the medium by which capital is distributed. In the ordinary state of the financial affairs of the kingdom currency is always passing on. The amount which individuals carry in their pockets to answer daily calls—the amount in the tills of the bankers, merchants, and tradesmen to meet daily demands—the gold or notes, cheques or bills, passed from hand to hand to transfer capital, and which, when the transaction is closed, are passed into the banks to form capital—all this whilst circulating is currency—and the amount necessary to carry on in this way the supply of pocket money and the transactions of the country is precisely the extent and limit of the currency. If more paper or gold is out than is necessary for these purposes, the excess of paper is sent in for liquidation, or, if gold, sent to swell the bullion reserve.

There is thus a strict limit to the amount of currency—you cannot enlarge it. Any surplus beyond what the daily habits of the country hold in suspension will drop back into deposit as capital, and immediately cease to be either currency or circulation.

If there is not a currency adequate to the wants of the country everything is embarrassed. As in petty dealings, when you cannot change a five pound note into gold, or gold into silver, you cannot buy—so when you cannot get gold or notes for your money on deposit, and your cheque is not accepted, the business cannot be transacted, but must stand still.

Our currency laws were designed so to regulate our paper circulation as to insure its being, without delay or loss, convertible into gold, that it may be of equal value abroad and at home. These laws were never meant to cut down the currency below the wants of the nation, or to say that when foreign states want 6 millions of gold that the currency of England must be carried on with 6 millions less. If, as we have seen, a nation can never maintain in circulation an amount of currency beyond the necessities of its daily transactions—that circulation cannot afford to be diminished without involving the country in most serious trouble.

But this is precisely the mischief the currency law of 1844 by its enactments, works. Desiring, by a very short cut, to arrive at the convertibility of notes into gold, it requires notes to be issued only on deposit of gold, and notes to be cancelled whenever the gold is withdrawn. This is a simple and very safe rule as regards home demands for gold, because the notes would not be presented for gold unless they were in excess of the needed amount of currency. But when a foreign demand for gold arises, altogether unconnected with our home currency, and (say) 6 millions of gold is taken, our home currency is cut down by that amount, and becomes inadequate to the transactions of the country. Our circulation of Bank of England notes was, in 1864, over 21 millions, and the average of ten years ending 1874 is 24½ millions, whilst in 1875 it is 27½ millions. It is difficult to conceive how we can spare 6 millions, and go back to the standard of 1864, when our trade represented in imports and exports was 487 millions, compared with that of 1874 of 667 millions.

In spite of the attractive symmetry of the rule of cancelling all notes presented for gold, no matter on what account, it is clear provision must be made in our law to meet the case of foreign demand for gold, and that our issue department shall distinguish between foreign drains and home demands for gold, and seeing our currency is not in excess, trust to the balance of trade to bring back the gold, or if the drain is excessive, take the same means to buy gold of the foreigner which the foreigner uses to take gold from us, viz.:—to buy bills of a gold currency state, and take payment in gold.

VIII.—*Effect of our Currency Law of* 1844.

In order to prevent our paper currency ever becoming depreciated, all notes must be payable in gold, either at once if Bank of England notes, or if country notes by first demanding Bank of England paper in exchange for them, and then for this paper demanding gold.

To secure payment in gold, the issue of Bank of England paper since our Currency Act of 1844 (beyond an amount of 15 millions for which the state has given security, and which amount is always absorbed in home currency where gold is not wanted), can only be made by the bank depositing in the bullion department gold to an equal amount, so that whilst the note is in circulation, the gold is there to redeem it.

This principle is very simple and intelligible, and as we have now had thirty years' experience of its working, we ought to be able to judge of its efficiency.

Our first remark upon it is that the law has broken down three times, and on each occasion was abandoned, and power for a limited period given to the bank to issue notes without gold, protected, however, in amount by the charge of a penal rate of interest. Those occasions were in 1847, three years after the law was passed, again in 1857, and a third time in 1866. The tradition of the Stock Exchange is that every tenth year the law must be broken.

Our next remark will be that we should look how we now stand under the operation of it, whether our currency arrangements are safe under the usual course of events, and moreover calculated to meet a financial panic should one again occur, as must sooner or later necessarily be the case.

The Bank of England has now (December, 1875) a circulation of notes of 27½ millions.

If we deduct the 15 millions which may be issued without gold, it must have in bullion to redeem the notes 12½ millions.

The bank is the depository of all other bankers' reserves; these reserves are kept by the bankers of the kingdom to enable them to repay deposits which, deducting those of the Bank of England, exceed 700 millions. It is, therefore, an absolute necessity this reserve should be ready when called for, and to make it so bullion to an equal amount must be kept in hand. The amount of these reserves is not given for this year, but a Parliamentary return gives the average of 1871-72 at 8 millions, and it cannot now be less.

There is thus absorbed 20½ millions of bullion, which the Bank as to 12½ cannot, and as to the further 8 ought not, to touch.

The present (December, 1875) stock of bullion is 22½ millions, which leaves an available margin of only 2 millions, on which the bank can issue notes to meet its general banking liabilities, which amount to 17 millions, after deducting bankers' reserves.

The bank may indeed contract the circulation of their notes, but as we know of nothing at present calculated to unduly enhance the circulation, and the average of circulation for the last ten years has been 24½ millions, the margin here will not be more than 2 millions.

If the circulation is reduced below the currency needs of the country, business will be seriously injured.

IX.—*The Rate of Interest ought not to be thus Raised.*

On the review of the past, we thus find the disturbance in the rate of interest arising from the bank considering it to be its duty to raise the rate of interest whenever a drain of gold from abroad sets in, has been a very serious one.

A call from abroad, whether it be for bullion or for capital, will legitimately act upon the market towards an advance in the rate of interest, but this action should be left to make itself felt through the ordinary channel of supply and demand, without the arbitrary interference of the Bank of England.

It is obvious enough that a demand for 8 or 10 millions of money acting upon the surface of 800 millions of floating capital, would not produce a perceptible effect when sufficient time has elapsed to allow it to spread itself over our whole capital, and would form no ground for a permanent advance in the rate of interest. But if the demand comes in such a shape as to require its payment out of the currency of the country, and is confined to that portion of the currency which consists of gold and bank notes, its effect upon the money market would be far greater. Considered as capital payable out of capital, it would be as 10 to 800, considered as currency payable out of our gold currency it would be as 10 to 100.

We have never within the present generation had a drain of 10 millions, whilst we have often had the bank raising interest 1, 2, or even 3 per cent. above the ordinary standard, to stop the drain of bullion, and the disproportion between the drain of capital, or even of currency, and the arbitrary advance in the value of money indicated by the rise in the rate of interest is perfectly startling.

X.—*Effect of a Panic upon the Rate of Interest and on the Currency Laws.*

The second great cause of unnatural disturbance of the rate of interest to which we have above alluded, is the occurrence of panics. These, as we have seen, in 1847, 1857, and 1866, assumed such gigantic proportions as to call for a suspension of our currency laws altogether.

The ordinary course of financial affairs where no panic exists is that all balances of cash or currency beyond that which is necessary to furnish pocket money, the supply of the tills of our trading community, and the notes used in the daily payment of capital, is each day paid to the bankers of the parties holding it. Under this system it is obvious the transactions of the country will be carried on with a very much less amount of currency than if the habit of paying daily into banks did not exist. When a panic occurs, this habit of paying daily into banks is suspended, people, in alarm, keep the cash currency in their own hands, and bankers, merchants, and tradesmen hold a very much larger proportion of their reserve as cash in their tills; the ordinary course of currency breaks down, and more than double the ordinary amount of cash is required to carry on the operations of the country. This increased amount cannot be found, and alarm and embarrassment reign supreme.

Under such an extreme demand for cash, the Bank of England is the first party resorted to. The drawing out of the bankers' reserves, the demand for gold throughout the country to meet the possible refusal of bank notes, increases the disorder. Every million of sovereigns drawn out under such a pressure diminishes the power of accommodation of the Bank of England, and threatens to bring the bank to a stand.

A very slight disturbance in the money market acting upon the surface of 800 millions of deposits might call out of the banks of the kingdom 5 per cent. of the amount = 40 millions, which the depositors will like to keep at home in cash to meet possible contingencies. How shall it be given?

	Millions.
The margin always remaining on country note circulation might yield	3
The bankers' reserves in the bank would furnish, if all drawn out	8
The bank having contracted its circulation 2 millions, with the reserve of 2 millions would bring	4
Total available	15

Cheques in such a crisis are of no use: bank notes or gold alone will suit.

In this state of things the bank could not issue a note. It might have 20 millions of gold, but notes being in circulation to that amount could not touch it. If one of its own depositors should draw a cheque for 1,000*l.*, it must be dishonoured and the bank doors shut. The bank may have sound property to double the amount of its liabilities, but currency fails, and England stops payment, and with 20 millions of gold untouched!

This is no imaginary crisis. In 1847, when Sir Robert Peel was applied to to suspend his own Currency Bill, he stoutly refused until the bankers threatened to draw out their reserves, and he, seeing this would stop the bank, yielded. Also in the suspension of the Act again in the years 1857 and 1866 there was in each case one individual who if he had drawn out his balance would have stopped the bank.

We escaped these crises by suspending the law; but to justify the suspension of an existing law a case of great distress and suffering must occur, and although we may suspend the law again, we must first be plunged into this sea of suffering, and superadded we have found, after each crisis years of crippled trade and commerce resulting.

As such panics will certainly sooner or later occur, we should be prepared to meet them, and the existing law should provide for this.

But the liability of the bank to be involved in such a crisis makes it necessarily doubly cautious, and upon every indication of a call for gold the rate of interest is advanced. If at this present juncture there should occur a drain of gold to the amount of even 6 millions, the bank having only a margin of 2 millions, would have to withdraw the circulation of notes to the amount of 4 millions, or abandon the gold guarantee of one-half the banking reserves.

The withdrawal of 4 millions from the currency would work great mischief, while probably after the lapse of a twelvemonth the bullion would return and the trouble have passed away.

Upon the first appearance of a panic the rate of interest is raised, and if the alarm continues, interest is still advanced, even up to and beyond 10 per cent. In 1866 we had a continuance of 10 per cent. interest for about three months. The disturbance of the rate of interest under the action of panics is as violent as can possibly be conceived, and one to which the capital of this country ought on no account to be subjected.

XI.—*Remedial Measures.*

The remedy for this state of things, which involves such serious disturbances from foreign demands for gold and from recurring panics, is to disconnect altogether the issue department of the State from the banking operations of the Bank of England, so that the State shall issue and find gold to redeem the paper as asked for, and that the bank may, like every other bank in the kingdom confine its responsibility to the receiving and returning its customers' capital without concerning itself with the currency at all.

The issue department is nearly separated from the bank now, and it is only necessary to put its present officers under the control of a Government Secretary, instead of being controlled by the bank parlour, and the three operations to which its work is limited being (1) the purchase of bullion at the standard price, (2) the giving out of notes on an equivalent deposit of bullion, and (3) the receiving of notes in exchange for gold, would go on within the walls of the bank as at present.

We must hold strictly to our currency law that beyond 15 millions notes shall only be issued on an equivalent deposit of gold, so as to prevent the depreciation of our paper currency. This should be our general rule. But we have the two disturbing forces of foreign demand for gold and recurring panics to meet, and as these will certainly assail us at more or less frequent periods, we must in common prudence provide for them.

To make such provision is not a difficult thing. If the issue of notes were made a Government department, the same rules for a deposit of gold, for all notes issued beyond 15 millions, and for cancelling notes presented for gold, might be observed. But a power should be vested in the Government, on any such drain of gold abroad as would, by the amount of notes cancelled, cripple our currency, to issue notes on deposit of consols or other Government stocks, accompanied by bills at three months, carrying the current rate of interest, which bills might be renewed if the drain of bullion were not then returned to us; and on the occurrence of a panic to issue notes on a similar deposit as security, with bills at a month bearing a rate of interest so much above the current rate as to secure a speedy repayment. In either case the bills, at the option of the giver, should be redeemable at any time before they become due, and the Government would take upon itself the responsibility of finding gold for the cashing of all notes presented for gold, using the gold in the bullion reserve for that purpose.

This would provide for the recurrence of foreign drains of gold and temporary panics, whilst the permanent basis of our note issue would continue on an equivalent bullion deposit.

XII.—*The Rate of Interest should be Fixed by a Council of Bankers.*

The fixing of the rate of interest should be remitted to a council of bankers chosen from the whole kingdom, in analogy to the bankers' clearing house, the railway clearing house, the iron-workers' association, and other associated representatives of the great trading interests of the country. The bullion disturbance being removed, the rate of interest would vary more gradually and healthily, and our trade and commerce be delivered from violent catastrophes.

The changes of interest have been as follows, ranged in three distinct decennial periods :—

1844	1	1854	2	1864	15
'45	3	'55	8	'65	16
'46	1	'56	8	'66	14
'47	8	'57	9	'67	3
'48	3	'58	6	'68	2
'49	1	'59	5	'69	7
'50	1	'60	11	'70	10
'51	0	'61	11	'71	10
'52	2	'62	5	'72	14
'53	6	'63	12	'73	24
Total	26	Total	77	Total	115

This table shows the increasing sensitiveness of the Bank of England, and the increased necessity of relieving that establishment from the unfair responsibilities under which it now lies.

It is interesting to note the amount of bullion held in December, 1875, by some other countries compared with their paper currency :—

	Bullion.	Paper.
	Mlns.	Mlns.
France	66½	95
Prussia	23¼	33¾
Austria	13½	29½
Netherlands	13¼	15½
Belgium	4¾	12½

DISCUSSION *on* MR. BAXTER'S PAPER.

MR. JOHN DUN said the paper had the very signal merit of being eminently suggestive. He thought that, in placing the amount of deposits in the banks at 800,000,000*l.*, Mr. Baxter had greatly exceeded the real figure, and that 600,000,000*l.* would be much nearer the mark. Of these deposits a very considerable proportion was employed by the bankers in the shape of reserves, and neither directly nor indirectly applied to the accommodation of customers, and he was of opinion that the amount so applied in the United Kingdom did not exceed 500,000,000*l.* Mr. Baxter's comparison of the growth of deposits with the growth of the trade of the country must be taken with some little allowance, because in 1844 deposit banking was comparatively undeveloped. The banking resources of the country then consisted in a much greater degree than at present of note circulation, which had always been found to precede and foster the growth of deposits. If the necessary alterations were made in the author's figures in that respect, he thought it would be found that in 1844 the banking resources—deposits and note circulation—amounted to very nearly 100,000,000*l.*, while at present the resources for the accommodation of trade were about 500,000,000*l.* In the meantime the import and export trade of the country had increased from 134,000,000*l.* to 685,000,000*l.*, so that after all there was not such a startling discrepancy between the increased volume of trade and the increased amount of money which was applied by the banks to the accommodation of trade. Mr. Baxter had incidentally remarked that the banks paid within 1 per cent. of the Bank of England rate for the money which they had at their command. It might be perfectly true that upon the money placed with bankers on deposit the rate allowed had hitherto approximated to 1 per cent. below the Bank of England rate, but it should be remembered that of the money in banker's hands there were very large sums on current account, which probably amounted in the aggregate to more than the pure deposits. Upon these balances a very much lower rate, and in many instances no interest at all, was paid. He had compared the amount lodged in some of the joint stock banks in London with the total amount of interest shown in their balance sheets as paid to their depositors, and the result he found was that on the average they paid something under 1 per cent. per annum. With all deference to Mr. Baxter, he contended that it was no departure from the principle of supply and demand for the rate of interest of the Bank of England to be raised to prevent gold from going out or to bring gold back into the country. The operation of the rate of discount was the thing which must be mainly looked to for supplying the bullion which was unquestionably necessary to form the basis of the superstructure of credit in the country. The author said that there ought to be such a supply of bullion that a call from abroad for

3,000,000*l.* or 4,000,000*l.* might be answered without any financial disturbance, and without raising the rate of interest. Certainly, the problem which they all wished to solve was how to meet such a call without financial disturbance, but Mr. Baxter did not consider it necessary to raise the rate of interest to stem a foreign drain. If, however, that were not done, the gold would continue to go away and would not come back, and in course of time the reserve of bullion in this country would entirely vanish. The paper, again, stated the Bank of England currency was the only flexible part of the currency of the country, but there were considerable fluctuations in the note currency both of Ireland and Scotland, and in a smaller degree of the provinces in England, and it was contended before the Committee of the House of Commons last year, that it might be a very great source of relief to the Bank of England if greater extension and freedom were given to the normal play of the provincial currency. Mr. Baxter begged them to distinguish between currency and capital, but did he consider the deposits in the banks to be capital? The word "capital" was somewhat misapplied. If "A B" discounted bills with his bankers for 50,000*l.* and kept 10,000*l.* to his credit, that 10,000*l.* was not, strictly speaking, capital, and a very large portion of the money lodged in banks was merely the proceeds of loans or discounts. If 10,000*l.* worth of cotton arrived at Liverpool, it was easy to understand that that was capital, but if the importer's bill was sent over from New York to the credit of a New York bank with the Bank of Liverpool, that sum standing to the credit of the New York bank would not be capital. Again, if the cotton were sold in Liverpool to a cotton spinner, and a bill given for it, and that bill went to the credit of the banker of the cotton importer, there would be another 10,000*l.* figuring in the deposits of the country, and so the changes might be rung through three or four progressive stages, the actual capital all the while being merely the cotton itself. The Act of 1844 was founded upon an entirely erroneous principle, and had three several times broken down most disgracefully, but before any change in the law was demanded, the question should be considered whether the Act could, under certain circumstances, be worked. He thought it could, but the conditions were these—that the Bank of England, instead of keeping a reserve of 8,000,000*l.*, should keep a reserve of 20,000,000*l.* But could the Bank of England be asked to do that? That bank was a joint stock company, conducted for the purpose of reaping a profit for its shareholders. Why then should they keep the reserve of the country, and by thus performing a public duty perhaps diminish unreasonably their own dividends? If the London bankers locked up their own balances of bullion or of legal tender, the Bank of England reserve would then appear in its naked diminutiveness, and its managers would be forced for very shame to hold a larger stock of bullion. It had always been found that during a period of panic the London bankers had strengthened the Bank of England very materially by increasing their deposits, and in the evidence published in the blue book of the committee of last year, it was distinctly stated by one of the directors of the bank, that they relied upon the bankers' balances as an increasing and not a diminishing quantity in times of pressure. It might, however, be questioned how far the bankers in the city of London would in future pursue the same policy. He believed the altered conditions of the Bank of England, relatively to other leading bodies in the city, would inevitably lead the bankers to take care of themselves, and leave the Bank of England to take care of itself. If the Act were to be altered there were two ways in which the present state of affairs might be amended. Many eminent economists recommended that the Bank of England should have the power of an unlimited issue of notes, subject to the obligation to pay them in gold, and perhaps this would be a very reasonable change to make. The other scheme was that suggested by Mr. Baxter, to transfer the issue department to the State. That would necessarily infer leaving each bank to look after itself in a time of panic. It would relieve the Bank of England from the duty of keeping a bullion reserve, except for its own liabilities, and would throw the responsibility of keeping the national bullion reserve on all the banks, but chiefly on the great city banks. Would they then keep better reserves? He thought they would, especially if, as he should recommend, all banks were required to return and publish a monthly average of the amounts of legal tender held by them at the close of each week. This publication would excite a competition amongst them to show that they were conducting business upon sound principles, and there would be a very large addition to the amount of bullion held. While he could go with Mr. Baxter's proposal that the power of issue should belong to a department of the State, he most decidedly dissented from the suggestion that a certain power should be vested in the Government to issue notes on deposit of consols, &c., in case of a foreign drain of gold. For the Government to enter upon the business of bankers in any degree, in the direction of making advances to anybody for the purposes of trade, was entirely foreign to the proper functions of government, and would lead to confusion worse confounded, and panics would occur of a far more disastrous character than had been hitherto known.

In answer to a question, Mr. Dun said if the rate of interest afforded a sufficient inducement, the bullion taken away would return to this country, but not else. One of the great points in the paper was to secure a very steady rate of interest, but he believed that was impossible in the complicated and artificial state of the money market; though the fluctuations, both in number and extent, would be greatly diminished were a sufficient bullion reserve systematically maintained.

Rev. Mr. Doxsey asked Mr. Baxter how much of the 800,000,000*l*, he regarded as capital of the banks.

Mr. Baxter said he could not give the amount of capital. He had taken his statement from Mr. Palgrave's figures, but had not followed them into the details as to how much was capital.

Sir R. Rawson said Mr. Baxter's argument proceeded distinctly upon the supposition that the gold would come back. What was his reason for supposing that it would return within six months?

Mr. BAXTER said he had ventured to say that it would come back because it had always hitherto come back.

Sir R. RAWSON asked if it had not come back in consequence of the Bank of England raising the rate.

Mr. BAXTER said the rate of interest had very little to do with it. It was caused by the balance of trade.

Mr. HAMMOND CHUBB regretted that he could but see in the paper a repetition of the cry which had so often been raised, the object of which was to make a *pound* serve the two diametrically opposite purposes of settling a payment and being retained as money at the same time. This is to be accomplished by the old device of sending the *gold* abroad to settle any balance of trade against us, and keeping the *paper note*, which represents it, at home to answer our own purposes. The subject naturally divided itself into two parts, the evil and the cure for it. His object would be to refer chiefly to the cure, but it struck him that in the statement of the evils there was at least some confusion, if not error. First of all the use of the word "currency" was somewhat loose. Banking balances were referred to as capital, and cheques were called currency. Some admirable remarks had been made by Mr. Dun in regard to bankers' balances; but what was intended by the term "currency?" Was it money? Surely the true position was to regard cheques and all the various facilities afforded by bankers as expedients for economising the use of money; whilst money itself consists solely of gold which is the standard of value in this and foreign nations; or, of course, of bank notes which represent and are exchangeable into gold. Another subject had reference to foreign drains, the greater part of which, as Mr. Baxter himself stated in one place, were caused not so much by the efforts of foreign nations to establish a gold currency, as by the balance of trade being against this country. But, from the general tenor of the paper, it would almost seem as if the foreigner had the right to turn the tap on at any time and run our gold off at his own pleasure, and that it would subsequently come back again in the natural order of things. The arguments generally seemed to ignore the fact that gold could only be taken away by the foreigner when he had the right to demand it, in respect of debts due to him; and that the only means by which we could secure its return, was by creating such an opposite condition of things that the claims should be reversed, and we have the means of demanding it from the foreigner. If, however, there was confusion in stating the evils which exist, what could be said of the remedies proposed, which, put shortly, if rather bluntly, would consist of watering down bank notes when occasion seems to require it, and keeping up the nominal amount of them when the gold has been sent away. Mr. Baxter would strive to keep a certain definite volume of currency, in the shape of bank notes, without caring whether there was gold at the back of them or not; he believes that the maintenance of this volume of valueless notes at home would obviate the necessity of raising the rate as it is now raised when gold is leaving the country, and that the gold taken away would return as readily under the operation of this uniformly low rate as it has hitherto come back under the influence of high rates. The dearness or cheapness of money, however, was an index to the condition of the trade of the country; if the rate were high it generally showed that there was a foreign drain going on, because the balance of trade was against us. At present the means were at hand for altering the conditions, but Mr. Baxter would take away the means, and yet expect the same result. Mr. Baxter admitted that cheques, which he included in currency, were of no use in a time of panic, and yet he would reduce the Bank of England notes to the condition of cheques or promises to pay without any bullion whatever at the back of them, and believed that that would have the same effect as notes which represented the actual quantity of gold at the bank. It was not necessary to look very far to see what condition of things would very soon arise if that plan were adopted. A few years ago, under the auspices of this Society, he (Mr. Chubb) had the pleasure of being in St. Petersburg, and by the courtesy of the governor of the Bank of Russia, he was enabled to obtain information of the state of things existing in that country. This was just what the proposals of the paper would reduce us to in England. There was a distinct law in Russia that bank notes should always be represented by a certain proportion of gold, but certain State officers had the very power which Mr. Baxter recommended for adoption here. The result was that in times of difficulty they had sanctioned the issue of notes without having the gold behind them, always in the expectation that the gold which had left the country would eventually come back again; but at that time a bank note there was not worth its full value by 17 per cent., in spite of all their efforts to bring them up to their nominal value. Mr. Baxter had said, why let foreign trade interfere with the home trade; but was it possible to separate the two? The condition of trade was precisely that which caused the foreigner to have a claim against England. Of course a bank note might be dissociated from its value; but then the gold would go abroad and would not return, and the notes would necessarily fall in value. What then would be the difference, whether there was a lower rate of interest with bank notes at a depreciation, or a higher rate with the notes at par? In the cry for the alteration of the currency laws, two things seemed always to be mixed up together, the currency law and banking. That legislation in regard to banking was required he would be the very last not to admit, but the object of the present law was simply to keep bank notes at their par value. Mr. Dun seemed to think that the proper mode would be for bankers to keep larger reserves, and that, at the next panic, that was the course they would take. There were many minds to which it occurred that this was the very thing which was wanted, and that it would prevent the continual falling back upon and desire to tamper with a currency law which was perfectly performing its functions. Mr. Dun paid the very greatest compliment he could to the value of the present law—the Act of 1844—when he said that the Bank had now been thoroughly educated by its means, and implied that, even if it were repealed, they could only continue to act as they had acted under it hitherto. He first of all said that the present law was altogether bad; then that the best thing to do would be to alter it, and in fact abrogate it altogether; and then by the force of facts he argued himself round to the conclusion that the condition of things would be precisely the same whether the law were abolished or not.

Mr. Dun said that that was straining his argument rather too far.

Mr. Newmarch said he agreed with Mr. Baxter, that if the gold went away the balance of trade would bring it back, but the bank rate had a deal to do with the balance of trade, which was the result of a great many circumstances, one of them being the rate of interest. The balance of trade was not merely the exchange of commodities between different countries, but also the exchange of securities which were easily transferred, and the rate of interest turned upon the price of those securities. There was, however, so much in the paper with which he agreed that it gave him great pain to find that he could not agree in its practical recommendations. He agreed in condemning the legislation of 1844, and hoped he should live to see it entirely abrogated, or at least modified in some very essential particulars. He implied no censure on the gentlemen who administered the Bank of England, but what the meeting had to discuss was the operation of a scientific principle which, if of importance in 1844, was infinitely more so now. He demurred to the doctrine that the issue of notes was not a function of banking. He knew no reason in the world why the holder of a bank note should be secured to the whole extent of the sum indicated on that note, while the holder of a deposit receipt was left to take the chance of a dividend; and the real moral of the three suspensions of the law of 1844 was simply this, that in each case the depositor was sacrificed to protect the holder of a bank note; *ab initio* that was a wrong state of things. The practical consideration was how to increase the ultimate cash reserve. To talk about every bank being prepared to meet a panic, by holding its own cash reserve, was simply going back into the barbarous days when every old woman kept a reserve in the thatch. In Russia the banking reserves were scattered up and down the country; but the whole purpose of English banking legislation was to minimise the ultimate bullion reserve which must be kept against the liabilities of the country. The trade of this country must fluctuate in consequence of variations in the seasons, in fashion and other things, and the greater the volume of trade the more certain was it that there would be such fluctuations. It was the tendency of modern improvements, such as the abolition of the corn laws, to lessen the causes of fluctuations, bet they would still occur, and it was the business of this country to provide a central reserve of bullion capable of bearing the strain which now and then must come upon it. But the Act of 1844 made no distinction whatever between a drain, such as arose every autumn when people started on their travels, and a drain caused by the balance of trade. England attempted too much trade upon a small reserve, and that was the defect upon which Mr. Baxter had rightly put his finger. He regretted that the paper had attempted to draw distinctions between bank notes and deposits. When a debt was incurred in this country it must ultimately be met in the current coin of the realm and nothing else; and it was precisely because a sufficient reserve was not husbanded that the perturbations in the rate of interest occurred. One might as well expect to have a uniform amount of sunshine or moonshine as a fixed rate of interest in a country like this, but it was quite possible by wise legislation to prevent those numerous changes which now took place. It would greatly conduce to the security and extension of trade if merchants could be assured that the rate of interest would not jump up and down like the thermometer in the weather which had recently prevailed. The real remedy was to apply to the management of the banking system the common sense rules which were adapted to any other kind of business. The currency depended on gold as a commodity. At the base of the currency there must be sufficient of that commodity to bear small variations one way or the other, either for internal or external purposes. He had always advocated, and did so still, the abolition of the division between the two departments, for this was the only country in which such a distinction existed. In the Bank of England, or some other central bank, a stock of bullion should be maintained sufficiently large to bear fluctuations of 3,000,000*l.* or 5,000,000*l.* without alarming anybody. The tendency of modern commerce was to diminish the amount of those drains. In the early part of last year, when the trade with America became disturbed, the telegraph enabled England to dispense almost entirely with transporting bullion to America; still occasions must arise when the bullion reserve must be diminished, and provision should be made for such emergencies. A great central bank could not, however, be managed by a cast iron Act of Parliament. Discretion must be allowed somewhere, but he would rather let things remain as at present than leave the ultimate decision, in a crisis, to two or three barristers of seven years' standing, at the least, in a government office at the West End. His recommendation was not to bother about refinements as to currency, and circulation, and balance of trade, and rate of interest; but to realise the broad fact that England carries on the largest business which the world had ever seen in a particular commodity, upon the condition of finding that particular commodity, and nothing else, in certain quantities, at certain times, and commit the working of the system to the Directors of the Bank of England, under a legislation thoroughly revised after the collection of evidence by a royal commission.

Mr. Brooks said that in 1847, 1857, and 1866, the notes were watered by the Government under the Bank Act. He did not consider that Mr. Baxter's proposal for the administration of the Issue

Department would answer, for the officers of that department would have nothing to do, and they could not prevent the gold from going out of the country.

Mr. BAXTER in reply, said he was glad to have the sympathy of Mr. Newmarch in his condemnation of the Bank Act of 1844. It was not his notion that the Issue Department of the Government should be administered by barristers of seven years' standing, on the contrary, he would have the present managers continue the administration of it under the Government. It should be carefully borne in mind that if the bankers of London were to take out their reserves from the Bank of England, there would be no reserve left. Was it then too violent an idea to suppose that a crisis might occur when the bankers would find it more convenient or satisfactory to have notes for their reserves in their own hands to be ready to pay out to their customers? It was true that they had on several occasions helped the Bank of England, and doubtless they would always work to stand shoulder to shoulder to maintain public credit, but there might be circumstances when the calls upon them would render it necessary for them to have the whole of their reserves in notes to meet calls upon them; and those 7,000,000*l.* withdrawn, would entirely blot out the reserve in the Bank of England. The Bank of England had been defeated in their efforts to fix the rate of interest. Even at present the public would not follow them in raising it to 5 per cent., and if the opinion was correct that unless 5 per cent. were maintained no gold could be got, there would soon be no gold to be had. The bullion deposit, however, did not depend upon the rate of interest, but wholly upon the balance of trade, and the balance of securities was a very small thing compared with the balance of the legitimate trade in articles of export and import. The present condition of things, under the Act of 1844, would, if not corrected, certainly bring about a great calamity.

A vote of thanks was accorded to the author of the paper, and the meeting adjourned.

On the MUNICIPAL GOVERNMENT *of* PARIS. *By* SIR CHARLES W. DILKE, BART., M.P.

[Read before the Statistical Society, 15th February, 1876.]

PARIS has a population of over 1,900,000, and under 2,000,000. It has but 75,000 houses, London having nearly ten times that number, but the Paris houses are far larger on the average than the London ones, and there are between 800,000 and 900,000 "logements" in Paris, or sets of apartments. We have to compare with the 800,000 lodgers of Paris our 700,000 householders, and our unknown number of fixed lodgers.

While we are considering the point of population, it is interesting to observe the effect of a religious census, refused here, but taken in Paris. At the last census the population of Paris was 1,800,000, and the religious return shows—

Catholics	1,733,000
Protestants	41,000
Jews	21,000
No creed	5,000

But considering that half the people who die in the hospitals, when offered the sacraments of the Church, distinctly refuse them, it is clear that the religious census of Paris is of no real value.

One authority puts down the "logements" of Paris at only 450,000, but this appears to be an error.

Paris is about 22 miles round, and covers about 30 square miles.

"Administration" or Government.

The Department of the Seine consists of the town of Paris, and of a district on the north, of which St. Denis is the centre, and a district on the south, of which Sceaux is the chief town. On the east and on the west this department does not go far beyond the city.

The préfet of the Seine—nominated, as is the préfet of every department of France—has the ordinary powers of a préfet, but in addition is chief mayor of the town of Paris. On the other hand, a few functions which would naturally belong to a préfet are given in the case of the department of the Seine to a special officer—the préfet of police.

The general council of the department of the Seine is composed of the eighty members of the municipal council of Paris, plus three members for the sous-préfecture of St. Denis, and three for the sous-préfecture of Sceaux. The city of Paris is divided into twenty arrondissements (with about 20,000 voters in each). Each of these is divided into four quarters. Each of the eighty quarters in Paris elects one member of the municipal council. The municipal council elects its own president, who is, though not of necessity, also the elected president of the general council of the department of the Seine. The préfet of the Seine, and the préfet of police, have the right to attend and to speak before the municipal council, and also before the general council. They cannot vote.

Each of the twenty arrondissements—like every commune in France—has a mayor and two adjoints. Under the Government of National Defence the mayors throughout France were elective; now throughout France are nominated. But the twenty mayors of Paris are very different in power to the mayors of other communes, inasmuch as they have over them a chief mayor in the person of the préfet of the Seine, and an elective council for all Paris, responsible for the finances. We should call them "vestry "clerks." The municipal council of Paris sits four times a-year, for not more than ten days at a time, except in its budget session, which may last six weeks.

To return to the twenty mayors. While in the whole of France outside Paris, the mayors must be nominated from among the municipal councillors, in Paris the very reverse is the case, and the mayors must not be municipal councillors. These so called mayors are chief registrars for their districts; registrars of electors and "revising barristers;" "magistrates" for the purpose of witnessing documents and so forth; and "chairmen of boards of guardians."

Besides its mayor, each of the twenty *arrondissements* has a *juge de paix*, and each of the eighty quarters possesses a *commissaire de police*.

The *préfet* of the Seine, controlled as to expenditure and principles of administration by the municipal council, has under his charge, lighting, sweeping, watering, sewers; the regulation of cabs, of omnibuses, of markets; the collection of the municipal taxes; the maintenance of municipal buildings, including many of the churches. The twenty mayors become his administrators for these services.

The *préfet* of police, besides the functions which his title implies, has charge of the administration of the regulations for cabs made by the préfet of the Seine, and similar administrative powers with regard to public health, markets, and navigation of the river. He is also surveyor in chief of dangerous buildings. The police number from 4,500 to 6,600 men, according to the classes of men who are counted in. The ordinary "guardians of the peace" are about

4,000. The Government of France pays half the cost of the Paris police. (During the Empire it also paid a portion of the cost of new streets in Paris, but now this is no longer the case.)

The Paris Budget.

I now come to the Paris budget.

At the beginning of the Empire the income of Paris was 2 millions sterling; at the end of it, 8 millions.

It is about 4*l.* a-head for every man, woman, and child in Paris: a very heavy taxation when you add it to the national taxes of France, which, however, it greatly exceeds.

The heavy debt of Paris was contracted by the nominated functionaries of the Empire—Paris not being in any way consulted —as under the Empire the elective council did not exist.

The *octroi* is the chief source of income, and produces 4½ millions sterling a-year. The next largest is the rent of market stalls, which produces half a million. The other sources of income are numerous, but small. The tax on lodgings is progressive, and those under 400 frs. are exempt. This tax, which would here be called "Socialistic," was an invention of the Empire. The tax varies from 3 per cent. up to 14 per cent. on lodgings over 160*l.* a-year rent. But, of course, the *octroi* falls most heavily on the poor, and this tax may be looked on as a compensating one. The heaviest *octroi* duties are those paid by:—

1. Plaster.
2. Coal.
3. Wood.
4. Wine in casks.
5. Flour.
6. Meat.

By way of observations on the octroi duties, I may note that beetroot spirit has now almost entirely driven wine spirit out of the field in Paris, and that the so-called cognac sold in Paris can have in it but very little of the juice of the grape. Also, that Paris now burns (in value) more coal than wood.

During the Empire, the State used to contribute largely to the expense of new streets in Paris. It still pays half of the cost of the police. Those who in England complain that the State should contribute towards the support of London parks should remember that London pays at a far higher rate than would otherwise be necessary, for the post and telegraphs in order that the thinly populated parts of England may enjoy a low rate of charge. In the case of letters, a farthing for a very heavy letter would be a remunerative rate in London, and in the case of telegraphs we actually *did* pay but 6*d.*

to the old Companies, and were raised to 1*s*. by the Crown in order that from our profits they might carry lines for Imperial purposes to non-paying villages. Paris has a cheaper postal rate than that charged for letters to other parts of France.

To leave revenue and come to expenditure, the chief heads are:—

Debt (nearly)	4 mlns. sterling
Works (ordinary)	1 mln. ,,
Police	⅗ths of a mln.
Poor	½ mln.

(In aid of the local subscriptions and of the revenues of the "*hopitaux*" and "*hospices*").

To come now to details. I will first speak of police and then of poor relief.

Police.

There is in Paris an immense amount of police interference, of a kind which would scarcely be tolerated in London. For instance, every costermonger has his day's route marked out for him, every organ grinder is licensed. I fear that if such a plan were adopted here under a reformed metropolitan system, the minister in whose department London was would have a hard time of it. The préfecture of police has charge of the inspection of weights and measures, and of the inspection of adulteration. It is curious that while in London there is an outcry for "an adulteration inspection "as efficient as that which exists abroad," in Paris there is an outcry for "a system as effective as that which exists in London." The London "system" is doubtless irregular and partial, but those who know the two capitals well will hardly assert that on the whole there is less adulteration in Paris than in London. Another service under the préfecture of police, and also a complete failure, is that of the inspection of prostitutes. The last Paris report on the subject begs for the creation of a law as stringent as that which exists in England (garrison towns of course are meant), and states that while the number of prostitutes in Paris is not less than 50,000, the number inspected has never reached 4,000, and is now little over 3,000. The proportion of soldiers in hospital from venereal disease is as great as that in London. The *préfecture* of police fixes the price of bread in times of scarcity. All sales of food to market retailers are made by an agent of the *préfecture* of police. There are public salesmen for each kind of food, and goods are consigned directly to these persons even from Russia and from Southern Algeria, they remitting the money they fetch, less commission. One point in which Paris is before London is in the powers possessed by the *préfecture* of police to prevent the carrying on of unhealthy trades in the centre of the town.

Poor Relief.

There is a director-general of public assistance (with a council). Under him are 2,000 medical *employés*, and 4,000 other *employés*. This officer administers all public Paris charities. It has 4 million frs. a-year from charitable estates—not much more than one of our charities—Smith's charity, will soon produce—2 million frs. a-year from the special theatre tax, or *droit des pauvres.* Other funds—such as special gifts and bequests—increase its income to 13 millions of frs. The city of Paris adds 11 millions, and the total expenditure is about a million pounds sterling a-year. Relief is not given to able-bodied men, but in bad years public works are undertaken on purpose to make work.

The *bureau de bienfaisance* makes its own bread, buys and kills its own meat, buys and keeps its own wine. It makes 50,000 lbs. weight of bread every day for the hospitals and almshouses.

The number of persons relieved during the whole course of an average year in Paris is 130,000, or 1 in 16 of the population. There are twenty local *bureaux de bienfaisance*, or one in each *arrondissement*. The mayor of each *arrondissement* presides over a council of twelve administrators, each of whom has a zone or sub-district.

These local *bureaux* often receive legacies and gifts. Medical relief and drugs are given freely—indeed, too freely. Crutches and spectacles are given to almost all who ask for them, and are sold at once for drink. No relief of any kind is given to any father or mother who does not cause his or her child to be vaccinated, and to attend school. The town schools are free. Three francs are given to every poor man for a successful vaccination of his child.

The hospitals are under the *assistance publique*, and are considered wholly insufficient for the wants of Paris, although they contain double the beds for half the population, when compared with those of London. When the Emperor began to build the new opera house, he was induced to propose to the town of Paris to build at the same time a vast new state hospital in the centre of the city, as a sort of expiation for the expenditure on the doubtful luxuries of the opera house. A medical board was got together, and reported unanimously against the scheme which they were intended to sanction. They proposed instead to build, with half the money, twenty small American hospitals in the suburbs. The Emperor insisted on the scheme, and the *Hôtel Dieu*, not yet finished, has already cost nearly 2 millions sterling, or 2,500*l.* a-bed, while the doctors declare that it will be worse than useless. The present municipal council of Paris has been blamed for this folly, with which it has had no more to do than we have.

The composition of the general council of public assistance is extremely complicated, as the members are designated for nomination by no less than ten different bodies, but the medical element is large. Incurables are very generally admitted for life to the *hospices*, or almshouses. The hospitals of Paris receive 110,000 persons a-year. The almshouses, or *hospices*, answer to our poorhouses, so far as there is any resemblance between the systems, and all other relief is given at the houses of those relieved. All *secours à domicile* is given by the twenty local *bureaux de bienfaisance*. The *secours à domicile*, or out-door relief of Paris, costs 200,000*l.* a-year.

On the Empire must rest the blame of the sale of a great proportion of the landed property of the hospitals of Paris. In ten years lands to the value of 2 millions sterling were disgracefully sold.

Mont de Piété.

Another service of Paris, which differs also from anything existing in this country, is that of the pawnbroking monopoly, which is carried on by a nominated director and nominated council, under the préfet of the Seine. Every Government that has ever existed in modern France, Republic, Empire, Restoration, Constitutional Monarchy, Second Republic, Second Empire, and Third Republic, has had its day of weakness, in which the partial free-withdrawal of pawned articles has been proclaimed—with the worst results, the articles pawned being at once pawned again, and the money spent in drink.

Churches.

The city of Paris has to provide and keep up the older churches, and to house their ministers.

Schools.

The municipality of Paris has power to spend on schools as much as it pleases, and it is doing a good deal for them at this moment.

Water.

The water supply of Paris is much behind that of London in almost all respects, and only 36,000 houses out of 75,000 are supplied at all. The only point connected with water arrangements in which Paris stands before London, is in the watering of the streets, which is done by fixed hydrants—a far better system than ours of carts.

Drainage.

As on water, so on sewers—much money is being spent by Paris to make up lee-way, but Paris is still far behind London in its drainage system, which is barbarous in the extreme. I say barbarous, for sewage of Paris is run into the Seine even above the spot at which drinking water for Paris is drawn from the same river, and yet there is a public health commission for Paris, chiefly composed of *ex-officio* members—medical professors and so forth—and also a public health commission in each arrondissement.

The five great slaughter houses belong to the city; so do all the markets, the great depôt for wine, the *Palais de la Bourse*, or "stock "exchange."

When you are told that the municipal council of Paris is a failure, you must in the first place remember that it is elected by very small wards, each returning one member, and with no plan for allowing any but the one dominant faction to be heard. Also that it has little real power, inasmuch as it can be upset by the nominated *préfet* at any moment, and is blamed for his acts. The present *préfet* got his place for having sharply criticised his predecessors, Baron Haussman and M. Léon Say, but he has never shown the smallest qualifications for it. He certainly does not possess the one power wanted in such a post, viz., that of organisation. Also that the very existence of the elective council is quite new, and that it has had to contend with the fearful legacies of the Bonapartist debt on the one hand, and of the communal upsetting of everything on the other.

In comparing Paris with London, or in proposing for London a system in any way resembling that of Paris, we must remember that the miles of streets, and in consequence the gas, the watering, the "dusting" and sweeping of London, are out of all proportion with those of Paris, owing to the greater average height of the houses in Paris, and consequent density of the population. The superficial extent of the borough of Chelsea alone is greater than that of Paris of 1860, though the population is only one-fifth.

Conclusion.

To bring the Government of Paris into harmony with modern ideas, which might be done with very little change, it would probably be sufficient, while retaining the existing *arrondissements* and *quartiers* for administrative purposes, to have the council elected by all Paris with the cumulative vote instead of by quarters, and to abolish the nominated *préfet* of the Seine, and confer his powers upon the President of the Council General of the Seine, making the latter irremoveable for some years at a time.

APPENDIX.

The statistics of food are very detailed:—

	d.
The fowls eaten by Paris are 6 millions a-year, at an average price of	28
The ducks, 1 million at	27
,, rabbits, 2½ ,,	19
,, geese, 700,000 at	53
,, turkeys, 500,000 ,,	71
,, pigeons, 2 millions at	9
,, partridges, 600,000 ,,	21
,, larks, 2 millions at	1½

Paris eats—

35	million	lbs. of butter a-year
300	,,	of eggs, at an average price of 8*d.* for ten
60	,,	lbs. weight of fish
20	,,	of oysters
2	,,	of sheep, brought in alive
250	,,	lbs. weight of dead meat
15	,,	,, of grapes

APPENDIX II.

Summary of Paris Budget of 1875.

[000's omitted.]

RECEIPTS (*Principal*).	frs.
Direct rate	16,000,
Local dog tax	500,
Fines	500,
Stamps and fees	800,
Octroi and tax on sales	118,000,
Market rents	5,300,
Slaughter-houses	2,400,
Rents at wine depôts	2,200,
,, of town theatres	500,
,, of drinking stalls	900,
Other rents	900,
Cabs (from companies)	3,600,
Funerals	1,700,
Gas (from companies)	11,000,
Water ,,	7,600,
Sewage ,,	1,250,
College and school fees	1,850,
From France, for police	7,000,
,, streets	3,000,
	185,000,
Various, includes sale of lands	17,000,
	202,000,

EXPENDITURE (*Chief Items*).	frs.
Debt	95,000,
Works (lately suspended)	25,000,
Police	20,000,
Poor	12,000,
Collection of octroi	6,000,
Twenty Mairies	4,000,
Architectural plans and fine arts	4,000,
Streets	18,000,
Education	10,000,
Parks, lighting of public buildings, Bois de Boulogne	7,000,
Sewers	3,000,
Water	3,000,
	207,000,
Less works	25,000,
	182,000,
Miscellaneous	20,000,
	202,000,

Discussion *on* Sir C. Dilke's Paper.

Mr. F. Purdy said he regretted the absence of Sir Charles Dilke, because he might have answered some questions that could not otherwise be satisfactorily cleared up. They had heard a great deal about the organisation of Paris, and Sir Charles Dilke had, in a few lines, disposed of the manner in which the Government of Paris should be brought into harmony with modern ideas. One could not draw a proper comparison between two such cities as London and Paris, unless he calmly sat down and elaborated the statistics relating to both places. In this country there was not, as in France, a clean sweep of everything, such as was brought about by the revolutions to which the country was subject. Things in this country went on in a more gradual and practical manner. Referring to London, it had 30 poor law unions, containing about 200 parishes, with 400 overseers to collect the poor rates. They paid the larger part of those rates over to the unions, and the unions, in their turn, paid about half their share over to the metropolitan common poor fund. Hence there was great complication in the mere fiscal branch of the poor law as administered in London. The area of the metropolis had also grown up in a very curious manner. The fact of it was that the metropolis, as now legally defined, mainly followed the lines laid down by Dr. Farr in the early registration tables; but, if he remembered rightly, Dr. Farr struck out something in one year.

Dr. Farr: Oh, no.

Mr. Purdy said he thought that that was the case, but of course he stood corrected by his learned friend's statement; now it appeared the limits were not altered by subtraction but by addition. The area of the metropolis was now legally defined for two objects: for poor rate purposes and for local tax purposes. The areas differed in this respect; Penge was left out of one and put in in the other. Although the whole quantity differing was not very large, still it did differ. By the Metropolitan Assessment Acts the rating had been improved in a very great degree; the statute had the effect of bringing in districts that were not previously rated to the poor, such as the Inns of Court and some other privileged places. Some years ago representatives from the London Dock Company came up in deputations to Whitehall, and said it was a very grievous thing that the people down at that end of the town should have to support the great numbers of poor there resident. It was shameful that the rich west end largely avoided the burthen. Since that time the St. Katherine's Docks and the London Docks had become commercially one body. The London Docks did not now grumble about inequality of rates. In the private Act under which the St. Katherine's Docks were erected, it was provided that the new and costly buildings should only be rated to the poor on the value of the wretched property they replaced. At the present moment, he believed, the St. Katherine's Docks were still rated according to the value of that once wretched area on which they were built. He then referred to the municipal functions of London; in looking at which many curious things were noticeable; the old city, comparatively a dot in the centre, managed by the corporation and guarded by its own police; the multitudinous districts encircling that dot, which were managed by vestries and the local boards under the control of the Metropolitan Board in Spring Gardens. One of the most important sanitary agents was not, however, within the control of that body. The domestic water supply of London was under the supervision of the Local Government Board; but where the service was required for watering the streets, or for extinguishing Fires, it came within the exclusive jurisdiction of the Board of Works. This was a peculiar and anomalous state of things. Complex as this metropolitan organisation was, the administrative scheme outside of London was still more complex.

Mr. HYDE CLARKE said he was sorry Sir Charles Dilke was not present, as he could have answered some of Mr. Purdy's remarks. Mr. Purdy had said that the difficulty in comparing Paris with London was that in Paris everything had been subjected to constant change, while in London there was not the same state of affairs. If Sir Charles Dilke had been present he would have told him that since the time of the Prevôt des Marchands to the present time, Paris had not been subjected to more changes than London. Mr. Purdy had accused Dr. Farr of inventing the area of the metropolis. There was just the same question as regards area within and without the barriers of Paris. There had been also changes in the area of Paris.

Mr. LUMLEY, Q.C., said he should have been glad if Sir Charles Dilke had given the authority from which his information had been obtained. He should also like to know more clearly whether 1 in 16 meant the average of each day's relief, or whether it meant the average of those relieved in the whole course of the year.

Mr. FREDERICK HENDRIKS expressed his surprise that Sir Charles Dilke should, in his paper, have gone so far as to recommend the abolition of the system of government nomination to the office of the *Prefét de la Seine*. To do this would be to sweep away one of the best institutions of France. So far from there having been, as the author of the paper would have us believe, constant changes of system, the fact was, that in all the changes of constitution France had passed through since the first revolution, the administrative powers of the *Préfecture de la Seine* had been constantly maintained and perfected. The reformed municipal system inaugurated by the first revolution had worked ill. Napoleon the First directed his best endeavours to improve it, and in this he was aided by Frochot, that great man to whom the present system was mainly indebted for its organisation, and who worthily filled the post of the first Préfet de la Seine. In one of Napoleon's speeches, early in this century, an excellent exposition was given of the principles, the authorship of which may be mainly traced to Frochot himself, regarding the establishment of prefectures through the whole of France. The Préfet de la Seine, it was then truly asserted, ought to be a much higher office than that, for example, of the Basses Alps. He was intended to be a kind of minister; and, with that view, his salary was fixed at no less considerable a sum than 4,000*l.* a-year. Through all subsequent changes this high position and influence had been maintained. It had, from the beginning, been the desire that his office should be made the means of carrying out those vast improvements of Paris that have since adorned it beyond all other cities. But the scale of this, and the means of its development had, of course, very different proportions at first as compared with now. When the office was first established, Paris had only a population of about 650,000. Its population was now three times as great. But what were the circumstances as regards increase of revenue? Here we get to the remarkable statistical fact that the revenue has, in the same period of time, increased, not threefold, but fortyfold! He (Mr. Hendriks) was quite unable to judge whether the want of power of organisation of which the author of the paper accused the present Préfet de la Seine, was, in every respect well founded; but he would venture to assert, without fear of contradiction, that the first Préfet, Count Frochot, and his successors in office, including Baron Hausmann, had shown the utmost skill and success in administration as a general rule, and had proved, by results, not only that they were equal to the occasion, but that the system itself was sound and in every way adapted to the public wants of the country.

Dr. Farr explained, in reference to the remarks made by Mr. Purdy as to the boundaries of London, that the Registrar-General had added a considerable number of the outlying districts around London to those in the old bills of mortality, for the purposes of his reports. Once added, no district had been removed. Sir Benjamin Hall accepted that boundary very nearly which Mr. Purdy said he (Dr. Farr) had manufactured, as the basis of his Act for the Metropolis. London as it now existed contained about 122 square miles, or was about four times as large as Paris. Latterly London had been overflowing its borders, and the outer ring was becoming more populous every year. Last census it contained 600,000 people, and very shortly it would contain 1,000,000. The disadvantage of the old organisation was that the city of London, on a square mile of territory alone, held municipal institutions and a lord mayor, who played a conspicuous part in English history. He, no doubt, did a great amount of good within his sphere; but outside the city, London, long deprived of municipal government, was in great disorder; especially before Sir Robert Peel's Act, which so much improved the condition of the police. London was dependent on a number of companies, no doubt most excellent and enterprising in their way; but as commercial companies enjoyed a virtual monopoly, they charged for their gas and water monopoly price, a price much above what it could be now supplied for by the Metropolitan Board of Works. Inner London enjoys some of the advantages of municipal organisation. The Metropolitan Board of Works and the City have fought the gas companies; and gas is to be reduced in price to 3*s.* 6*d.* per thousand cubic feet. The outer ring is left out in the cold. It has nothing but an imperfect system of sewerage, if any; it is without a municipal organisation or the means of combined action, so its various parts are supplied with gas by numerous companies at rates varying from 4*s.* 9*d.* to 8*s.* per thousand cubic feet. London, as it was constituted by Sir Robert Peel for police purposes, should have for all purposes all the advantages of a good municipal organisation. The Society was much indebted to Sir Charles Dilke for his description of Paris. They could not accept the Paris model; but some of its best features, as described in the paper might be turned to good account in the improvement of the local government of England.

NOTE.—With reference to the wish expressed in this discussion on the foregoing paper as to the sources from which the information had been obtained, Sir Charles Dilke states that "he got the food statistics from the great work on Paris by Maxime Du Camp; the other particulars were gathered up by personally inquiring of the Secretaries at the Mairies in the various arrondissements, to whom he obtained introductions."

On INTERNATIONAL PRISON STATISTICS. *By* FREDERIC J. MOUAT, M.D., F.R.C.S., *late Inspector-General of Prisons, Bengal.*

[Read before the Statistical Society, 15th February, 1876.]

THE statistics of prisons, which form an integral and essential branch of judicial statistics—of one great department of which they are, indeed, the complement—are essential to the correct understanding and effective working of all systems of prison discipline.

The subject of judicial statistics has been considered and discussed at nearly every Congress devoted to the collection and interpretation of facts illustrated by figures, which has assembled in Europe. The difficulty of establishing a uniform basis of comparison has, heretofore, prevented the introduction of an international system of judicial statistics. This cannot be overcome until an international nomenclature of crime, and a uniform plan of registering the operations of the civil and criminal laws of different countries, has been adopted. The difficulties connected with this great and important branch of the administration of the law are undoubtedly very great, but they are by no means insuperable, and will certainly be resolved in time by the combined learning, wisdom, and conjoint action of the jurists of all nations, in those International Congresses which are among the most hopeful features of modern progress and civilisation. The late illustrious and lamented Prince Consort —a man far in advance of the age in which he lived, and more exalted by his virtues even than by his position near the Throne—hoped that the contests of civilised nations in future, would rather be in arts than in arms. Should his wish ever be fulfilled, and his hope cease to be the flattering tale which Hope is believed habitually to tell, by no agency will such a consummation be more likely of realisation than by such assemblies as those periodic international gatherings, of which none are making a deeper mark on the age in which we live, than that to which our labours are devoted. In what more thoroughly humanising and Christian work, indeed, could our Society be engaged, than that of continuing and completing the labours to which the life of John Howard was consecrated?

Although, then, the full development of an international system of prison statistics is dependent upon that of criminal justice generally, as an independent branch of the application of the numerical method, an international system of recording the facts and incidents of the measures adopted in different countries to punish and repress crime, appears to me to be not only desirable, but perfectly feasible.

The basis of all systems of repression is the punishment of the offender, his reformation, and the protection of society. This is common to all countries, and to ascertain the result of the measures of repression adopted does not present the same difficulties and divergencies, as do those of international judicial record generally.

At the first International Statistical Congress, held in Brussels in 1853, no special mention was made of the statistics of prisons as a separate branch of judicial statistics. Many of the facts connected with those convicted of crimes were, however, comprised in some of the categories adopted.

At the second Congress, held in Paris in 1855, a large amount of attention was devoted to the consideration of the statistics of penitentiary establishments, and the order and method of classifying and recording the facts connected with them were enunciated in considerable detail.

The principal heads under which the facts were to be arranged were specified, care being enjoined in regard to each to distinguish the accused, the convicted, and juvenile offenders.

They were as follows:

1. The annual movement of prisoners in houses of detention, including admissions, discharges, and the actual state of the prison population on a fixed date, such as the last or first day of each year.

In this statement was to be considered all transfers of prisoners from every court, so arranged as to provide that the same prisoner shall not appear on the general record as more than a single individual.

2. Civil statistics including sex, age, religion, birthplace, domicile, judicial antecedents, profession or calling, instruction prior to trial, crime, and punishment.

3. Discipline in the prisons; breaches of gaol discipline whether punished by prison rules or by sentence of criminal courts; rewards, pardons, and commutations of sentence.

4. The industrial regimen of the prisons in all relating to the labour and employment of convicts, and its economic results.

5. Religious, moral, and secular instruction as compared with that of the prisoner prior to incarceration.

6. Health and disease, including all circumstances connected with the hygiène of prisons and prisoners.

7. "Institutions de patronage" (Prisoners' Aid Societies), where they exist.

8. Galleys and places of transportation, where they exist.

With respect to each prison, information to be afforded as to—

1. The character of the imprisonment, whether in association, separation by classes, in separate confinement; mixed separation and association, or solitary confinement, and the cubic space assigned to each individual, with the plan of ventilation, &c.

2. The rules for the maintenance of order and discipline.

3. The executive and administrative staff of the prison.

4. The dietary in quantity and quality.

5. The clothing of the prison, with the lighting, washing, heating, and arrangements for sleeping.

6. The domestic economy of the prison.

7. The hygiènic regimen.

8. The cost of the prisoners under each head of charge.

9. Disposal of the time of the prisoner in work, meals, religious and other instruction, rest, &c.

10. Prison libraries, their use and results.

The above to apply to all classes of prisons.

For houses of preventive detention and correctional prisons, details were to be furnished of the establishments, annual movement of prisoners, and mean numbers in custody, with all particulars in detail on the first and last day of each year; discipline, labour, instruction, and sanitary state, each in detail.

Similar details of convict prisons.

Establishments for juvenile offenders to be separately and specially treated in a similar manner.

In short, the statistics of all classes of prisons were to show the antecedents of prisoners, their civil and social status, their crimes, the nature and effects of the punishments to which they were sentenced, with their results.

Incidentally were to be afforded all particulars connected with the cost, health, and other circumstances incidental to imprisonment.

The fourth congress was held in London, under the presidency of the Prince Consort, and the Judicial Section was presided over by Lord Brougham.

Upon the subject of gaol statistics the congress recorded the following resolutions :—

1. "That the prison statistics should exhibit the number of "prisons, distinguishing those where persons are detained from "those where convicts are subject to punishment; the system, "discipline, and accommodation in each prison; the number of "prisoners entered and disposed of according to their age, sex, "place of birth, trade or occupation, crime and punishment; the "number of recommittals in the respective prisons; the dietary, "and the state of health, viz., the rate of mortality, number of cases "of suicide and insanity; the amount and value of work performed

" by, and means used for the reformation of prisoners, by instruction, by lectures, by teaching of trades, and other industrial occupations, and the results; the cost of the prisoners; the number of " prison offences, and how punished; the escapes and attempts to " escape; the number released previous to the expiration of " sentence, by license or otherwise, in relation to the crimes they " had committed, and the amount of punishment they had " undergone."

2. " That the statistics of criminals should show the number of " lunatics who are found such upon apprehension, before trial, and " at and after trial; such as are committed to special prisons or " asylums; the number of such asylums to which they are committed; the time during which they are detained therein; the " number discharged cured and those who die therein; the cases of " crimes committed by lunatics who have been discharged as " cured."

The congress held at Florence in 1867 expressed a hope that in the statistics of prisons and penitentiaries, besides the general and special information ordinarily afforded by official returns, some distinct specification should be made as to whether the criminal had been under the care of any Prisoners' Aid Society; if that institution was maintained by the State, or was due to private initiation; during what length of time the criminal had been under observation; how he has employed and conducted himself, and if for any reason the society had ceased to give him aid.

The next appearance of the subject was at the eighth Statistical Congress held in St. Petersburg in 1872, when much time and attention were devoted to judicial statistics generally, and to criminal statistics in particular. Able and lucid notes were presented for consideration by Dr. S. Mayer, of Bavaria, on the registration of the data of criminal statistics; by MM. Raviesky and Outine on the same subject, with a note by the latter on judicial records; and by M. Tagantsen on the nomenclature of crimes. Formularies were suggested for adoption by the Congress.

After considerable discussion, models of bulletins for recording the proceedings of judicial courts and of individual judges in criminal cases were adopted, as well as a general nominal roll of every individual charged and tried for any criminal offence.

The latter is subjoined, and is a document which should be sent withe very prisoner to the gaol or penitentiary in which he is to undergo his sentence.

Nominal Roll of Criminals.

1. Name, surname, and other individual designations.
2. Age at the time of commission of punishable offence.

3. Civil status (unmarried, married, widowed, separated or divorced, with or without children).

4. Religion.

5. Mother tongue.

6. Degree of instruction (completely untaught, able to read only or to read and write, well educated).

7. Birthplace.

8. Birth (legitimate or illegitimate).

9. Domicile (rural or urban).

10. Social status, profession, employment. (If the offender be a minor, the profession or occupation of his parents, or his state of orphanage, or deserted child, to be stated).

11. Means of livelihood (state of fortune).

12. Infirmities (deaf, dumb, blind, &c.).

13. Nature of offence with which the individual is charged.

14. Presumed motive of the act.

15. Sentence of condemnation or acquittal. In case of conviction specify the offence for which the sentence is awarded, with an exact indication of the section of the code.

16. The offence was committed (when, where, by one or several persons).

17. If the offender has been detained prior to conviction, and the length of this detention.

18. If he has been left at large, the measures taken to prevent his evading trial.

19. Punishment awarded.

20. If the trial has been by or without jury.

21. If there have been one or more previous convictions (for the same offence; for a different offence).

22. If it be a case of relapse, to what punishment and when the convicted offender was previously condemned.

The details of prison statistics were relegated to the Congress to be held at Buda-Pesth in the autumn of the present year.

Among the additions to International Congresses, by no means the least useful and important are those devoted to the study of prisons and prisoners. The initiation of this desirable movement is due to Dr. Wines, and to the United States of North America, in which he fills an all-important place in relation to those unhappy beings, who render penal laws and restraints so important a consideration in the home government of all civilised communities.

At the National Congress on Penitentiary and Reformatory Discipline, held at Cincinnati in 1870, a plan of uniform annual statistics of crime was presented by Dr. Ourt. This is excellent as far as it goes, but it does not provide all the details requisite for the right understanding of the different systems of penal discipline in use in different countries, and evidently was not intended to do so.

The subject was next considered at the International Penitentiary Congress held in London in the summer of 1872. The discussion was opened by Signor Beltrani-Scalia, but no specific results were recorded at the time. The most important out-come of the Congress in this direction, was the appointment of an international committee to consider, among other things, the question of prison statistics, and to give practical effect to the views of the Congress on the subject. This committee first met at Brussels in June, 1874, under the presidency of Dr. Wines, with Signor Beltrani-Scalia as secretary. The latter gentleman had forwarded blank formularies for the collection of penitentiary statistics to all the governments which had taken part in the London Congress. Seven of them—Belgium, Holland, Denmark, Hungary, Saxony, Sweden, and Italy—have filled up and returned the tables. The other Governments promised future co-operation, and the details in some instances were compiled from published returns and reports.

In 1875, Signor Beltrani-Scalia published at Rome the first tables of international penitentiary statistics, the results recorded being for the year 1872.

These results are contained in seventeen tabular statements, classified as follows, viz. :—

I, II. Movements of the population in houses of detention, &c. The population is given for the first and last days of the year.

III. Establishments, public and private, for correctional education (reformatories).

IV. General movements of the population in the above-mentioned institutions, including their judicial condition and sanitary state.

V. The number, character, capacity, and present average population of penitentiaries, showing the numbers on the cellular system, the separation by night and work in association during the day, the prisons in which prisoners are associated by day and by night, and those on the mixed system.

VI. The movement of the population in the different categories contained in Table V.

VII. Classification of the condemned in the same institutions on the 31st of December, 1872, distinguishing the healthy from the sick, giving the total number present during the year, with the average number present, and the strength of establishment employed.

VIII. Classification of the number daily present, and of the results of the labour of the convicts in penitentiary establishments.

IX. The cost of the same establishments under all heads of charge, showing the daily cost of each convict, and the gross and net expenditure incurred.

X. Information regarding the schools and libraries of penitentiaries. In this return Great Britain is blank.

XI. Gaol offences—punishments and rewards. The English and Irish returns give only the total number punished, without details of any kind.

XII. Particulars sent from the place of conviction regarding the convicts transferred to the penitentiary establishments, showing their sentences, their duration, the ages of the convicts, their nationalities and origin, and their means of living prior to conviction; their civil state, religion, degree of instruction and convictions, and the property found on them. Many of these heads are blank in the British returns.

XIII. Particulars recording the discharges from prison on the completion of sentences.

XIV. Particulars of convicts released during the year by pardon or conditional liberation.

XV. Deaths from disease during the year, giving the sentences, length of time in prison, portion of sentence unexpired, time passed in the respective prisons, age, and all other particulars.

XVI. Suicides in the same categories.

XVII. Criminals sent to lunatic asylums during the year.

In an appendix are a few details for each of the countries mentioned, as to their penal legislation, their prison dietaries, and the prison routine of each day.

The countries for which the above details are given are Austro-Hungary, Belgium, Denmark, France, Great Britain, Italy, Holland, Saxony, Sweden, and two cantons of Switzerland.

The labour bestowed upon the compilation of these reports must have been very great, and it is a creditable commencement of what will prove hereafter, if carried out in the same spirit, of great use in estimating the relative and absolute value of the prison systems of different countries. It is obviously, however, a mere skeleton, and will need considerable elaboration to render it useful for purposes of legislation. The mere figures convey comparatively little information. It will be for prison reformers, gaol officers, and statesmen to study and analyse them, and to interpret them by the light of their own experience to extract from them the practical lessons they are intended to convey.

The last meeting of the International Commission for the study of penitentiary reform was held at Bruchsal, in the Grand Duchy of Baden, in August last, when the principal question discussed was the organisation of a Second International Prison Congress, which will probably be held next year at Stockholm. At Bruchsal, one of the questions submitted for special consideration was the following :—" What formula would it be most desirable to adopt " for recording international penitentiary statistics." The report on this question was delegated to M. Yvernès, chief of the Bureau of Statistics and of criminal registers in the Ministry of Justice of France. As M. Yvernès is a distinguished and most efficient member of the International Statistical Congress, it is not improbable that he will introduce this subject at the approaching meeting to be held at Buda-Pesth. It could not be in better hands.

The last report on the Administration of Criminal Justice in France for 1873 has recently been presented to the Society, and like its predecessors is a model of lucid order and arrangement.

Having had a lengthened experience of prison administration on an extended scale, and in circumstances of considerable difficulty, I have naturally given much attention to the best and most simple methods of recording all the facts necessary to throw light upon the system of prison discipline in force in the prisons which were under my administrative charge from 1855 to 1870. These results are published in annual returns for the whole of that period, and I have endeavoured to present them in a condensed form to this Society in three papers contained in the *Journal*.*

I had intended in this brief review to have noted the points of excellence and shortcomings of the official reports of our own convict prisons and borough and county gaols in their statistical aspects, but I find that it would occupy more time than I am able to devote to the subject, and is, moreover, better suited for a Penitentiary Congress than for a Statistical Society.

The various Indian prison reports, and those from some of the colonies of Great Britain, are interesting and important records. The statistical details of the former are now drawn up on a uniform basis, and, although they do not contain all that could be desired and might with ease be obtained, this is a considerable step in advance.

When all the above reports and returns are harmonised and brought into immediate comparison by uniformity of system with the criminal and prison returns of the rest of the world, unmixed good cannot fail to result in the adoption of points of excellence from all, and in the rejection of all that is found on trial to fail.

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* Vol. xxv, pp. 175—218; vol. xxx, pp. 21—106; vol. xxxv, pp. 57—106.

All this shows clearly that for purposes of comparison it is absolutely necessary to give prison statistics an international character, that all gaol returns and reports should be constructed on the same basis, and that they should exhibit, as minutely as possible, the social status, antecedents, and moral and physical characteristics of each individual accused or convicted of crime prior to incarceration.

In the present uncertain and unsatisfactory state of international judicial statistics, it will probably be sufficient in gaol returns to give the name of the crime contained in the warrant of the court by which a prisoner is tried and sentenced, and under the authority of which he is imprisoned, with a special reference to the law, or section of a criminal code, relating to it.

This will show whether the offence has been against property or person, or any of the other categories in which crime is at present classified in the criminal jurisprudence of different countries. More than this cannot, I fear, be attempted at present.

In all other particulars uniformity of system can at once be adopted, and although all facts represented by figures must be interpreted with special reference to the ethnic and other considerations of each nation to which they relate, the basis of comparison being identical, prison statistics will throw much light upon the civilisation of different countries, as represented by their prison populations.

As respects the prisons themselves, the statistics should represent accurately and in minute detail all facts regarding their structure, arrangements, government, cost, and scheme of discipline, including labour and instruction, together with the feeding, clothing, and health of the inmates.

The effects of the discipline pursued can only be ascertained by the punishment and good-conduct registers of the prisons, and by following the liberated prisoners into private life, to ascertain what proportion have taken to honest courses, and how many have relapsed into crime. Uniformity of system in collecting and registering all such facts does not present the same difficulties as an international nomenclature of crime. Hence it appears to me to be most desirable that an international uniform system of prison records and registers should be agreed upon.

By such means alone can light be thrown upon the effects of the penitentiary and reformatory discipline practised in different countries, and by them alone can defects be brought to light with a view to their remedy or removal.

The statistics of criminal lunacy, or the relations of unsound mind to criminal acts, require also to be collected with great care and minuteness. There exists at the present moment considerable divergence of opinion on this important subject. One result of this is constant conflict between the bar, the bench, and those who have made a special study of aberrations of mind and their influence on the acts of persons labouring under them, as to the extent to which an individual who has committed a crime ought to be held legally and morally responsible for the criminal act.

In this inquiry would be contained the collection of facts as to the origin of the disordered mental state of the individual, whether congenital, caused by habitual indulgence in stimulants and narcotics, or in whatever way it is produced.

The constant and careful observation to which persons suspected of being of unsound mind can be subjected in prisons, invests this branch of gaol statistics with peculiar interest: no pains should therefore be spared to collect and record all particulars connected with it with extreme minuteness.

Prison statistics, then, should be divided into four categories, viz., the facts relating to the (1) prisons as buildings, and those relating to the persons confined in them (2) before, during (3) and after (4) their imprisonment.

1. The statistics of prison buildings should contain all particulars connected with their structure, materials, and cost, and show the arrangements of the cells, wards, and workshops; the amount of space afforded to each prisoner, cubical and superficial; the nature of the ventilation, drainage, and conservancy; with the provision for guards, warders, and prison officers, together with the kitchens, out-offices, store-rooms, and gardens, if any are attached to the prisons. The hospital accommodation, schoolrooms, provision for religious exercises, &c., should also be given.

While it is probable that too much stress has in some cases been placed upon the mere construction of prisons, and greater cost has been incurred than is really necessary; it is, on the other hand, undeniable that insecure prisons, and those in which inadequate means are provided for the separation, labour, and other conditions required for an effective system of control and discipline, are dear at any price, and render necessary a resort to coercive and other measures which are not calculated to secure the ends of imprisonment in a satisfactory manner.

In all the essentials of secure, healthy, and complete prisons the gaols of India, for example, as a rule, are extremely defective, and in the end costly—a fact which the collection of statistics regarding the buildings themselves would soon bring to light.

The practical result of the careful collection of such statistics would be to show the form, dimensions, and arrangements of prison buildings which combined the greatest security and fitness with the least cost—objects of considerable importance in all countries.

Although economic considerations are not of the first importance in such questions, they ought by no means to be overlooked or undervalued.

Statistics relating to the prisoners themselves should be collected in three separate categories, viz., prior to imprisonment, during imprisonment, and after discharge from prison.

2. In the first category should be contained all particulars relating to the age, sex, place of birth, dwelling, religion, education, profession or calling, social status, physical characters, and every circumstance connected with a prisoner that is calculated to throw light upon the cause of his crime.

A detailed and accurate record of his physical characteristics will aid in the collection of statistics on the physical development of man, in circumstances of unusual interest. The minuteness and accuracy with which such details can be gathered together in prisons invest the subject with special interest, and imparts to the facts so collected an exceptional value. The criminal population probably affords fair general averages of the population at large, and there is no inquiry relative to physical development to which they cannot be subjected in the temporary state of bondage in which they have placed themselves by the commission of crime.

Minute particulars regarding the social status of every person convicted of crime are of the utmost importance in relation to the action of the criminal law, to criminal legislation generally, and to such general measures of prevention as the facts and figures collected may show to be most desirable and necessary. Preventive are in all circumstances of greater value than curative measures, for obvious reasons. Crime may well be likened to an epidemic or contagious disease. It is in truth a moral disorder peculiarly apt to spread by contagion, and much more easily stamped out *in origine* than when it has taken hold of individuals or classes.

The first step in prison reform in Great Britain is probably in the education of the people, and in particular in the early training of all such individuals or classes as are known to be likely to recruit the criminal ranks. Hence our ragged schools and reformatories. This great fact has been brought out by such statistics of the antecedents of criminals as have already been collected. The whole matter is still, however, in an incomplete and imperfect state, and little substantial progress in penal legislation and prison discipline can be made until our knowledge of the antecedents of criminals is far more complete and perfect than it is at present.

3. In the statistics of the prisoner during his detention equally minute particulars should be collected regarding the abnormal state in which the commission of crime has placed him.

Information respecting his crime, his previous convictions, if he has been in prison before, his sentence, state of body and mind at the time of and during incarceration, his food, clothing, work, health and sickness in confinement, and state on discharge should be carefully noted. These particulars cannot be gathered in too great detail, for on their careful and accurate record must in a great measure depend our knowledge of the effects of imprisonment, moral and material.

The statistics of prison officers and establishments, with their cost, mode of appointment, training, and all particulars connected with them, should likewise be given in detail.

I myself attach little comparative importance to personal opinions on questions of this kind, but I place great faith in facts founded on figures, when they are susceptible of illustration by the numerical method and the figures are vouched for by men of repute and authority. I collected a good deal of information on this point in Bengal, and one result was the establishment of the fact, that in the internal management of gaols, prisoners in that country are, when carefully selected after a due course of probation, more trustworthy and of greater value in the maintenance of discipline than external subordinate paid agency.

It is to the absence of such records as those indicated above that much of the existing difference of opinion on the results of different systems of prison discipline is due. The provision of such records, carefully digested and conscientiously collated, will do more to promote sound views on the subject than all the discussions of all the congresses that can be gathered together in the absence of the facts and figures necessary to form a right judgment.

There is probably no branch of social economy in which a careful and correct digest of facts is more necessary for sound legislation, than that relating to crime and criminals.

Fortunately, there is none which affords the same facilities for collecting these facts with rigorous exactness, and applying them with almost scientific precision to criminal legislation.

The cost of the prisoner in all particulars should be carefully noted in detail, for details are the life of statistics, and in regard to prisons are of greater importance than gross results. It is comparatively of little consequence to know that it costs the nation 100*l.* to punish a criminal if we are not made acquainted with the exact nature and distribution of this expenditure. In this way alone can a hard and fast line be drawn between economy, parsimony, and extravagance.

There is no branch of political arithmetic in which greater errors have been committed, in India certainly, and possibly in other countries, than in estimating the cost of prisons, and none certainly in which false economical views have been productive of a greater amount of mischief.

The subject of vital statistics, again, can be investigated with peculiar exactness in prisons, if the necessary trouble be taken and the necessary expense incurred of recording the results.

The vital statistics of the prisons under my charge, which I collected for fifteen years in Bengal with as much minuteness as I could, clearly proved that in a large number of cases, and to many individuals a brief sentence for a trivial offence proved a sentence of death—a result which cannot be justified by any policy of financial expediency.

The same statistics showed that under very adverse circumstances, which it is not necessary to refer to further, but of which some details will be found in the *Journal* of the Society, a saving of life represented by nearly 40 per 1,000 annually was effected in the same time and in the same prisons.

It would be difficult to over-estimate the value of such records, and their value depends entirely upon the minuteness, care, and accuracy with which they are collected.

The vital statistics of the gaols in Bengal, during the later years of my incumbency, were collected in the forms drawn up with his customary skill and thorough mastery of the subject, by Dr. Farr, of the General Registry Office, and a recent President of this Society. They were in all respects more complete than those of any other country that I am acquainted with.

4. The fourth branch of the statistics of criminals is more difficult to collect, and is not so immediately connected with prisons as the two former, yet without it no criminal statistics can pretend to be complete.

The course of the criminal on his restoration to freedom, and his rehabilitation generally, are of the greatest importance as tests of the efficiency of the system of penal discipline to which he has been subjected.

A paper on this subject will, I hope, be read during the present session by one well qualified to throw light upon it.

Many agencies must be brought into action to secure accurate and trustworthy information on the subject. Police supervision, Prisoners' Aid Societies, and similar means, which it would take too much time to discuss, even if I, who have been so long absent from England, were competent to deal with it. All will, I think, admit its importance, and concur with me that the information cannot be collected in prisons only in regard to those who relapse and are reconvicted, and that it should be collected outside the prison by such agency and in such manner as the different political organisation and varying customs of different nations require.

Conclusion.

To sum up briefly, in conclusion, an international system of prison statistics, constructed on a uniform basis, should show all particulars connected with the construction, cost, and arrangement of prisons and penitentiaries, and should contain in detail a record of all facts susceptible of illustration by figures, regarding the three stages of the life of a criminal, viz., his antecedents, his prison life, and his post-penitentiary career, when he has suffered his punishment, expiated his offence, and resumed his position in society.

It would, I venture to think, be extremely desirable for international and legislative purposes if the prison statistics of every nation were condensed, and reproduced in a simple form every fifth year. It is difficult to note signs of progress in each year separately, for statistical inquiries, from their nature, are liable to inexactness and erroneous deductions in proportion to the limitation of the field of observation and inquiry. When extended over a series of years, as the facts are multiplied and the figures become more numerous, the deductions from them acquire greater consistence. Minor errors are eliminated, local, temporal, and varying conditions are harmonised, and knowledge acquires the precision necessary for scientific use, in proportion to the more extended area and time of observation.

I have myself taken the *lustrum quinquennium* as the limit of time adopted by the French, and as the most convenient period for the subsequent accumulation of facts and figures in cycles of years, until centuries of observations may be collected and collated with comparative ease.

The formula best adapted for international prison registers is that of individual bulletins, similar in character to that adopted by the Congress in St. Petersburg for the record of judicial proceedings in criminal cases.

Each bulletin should be numbered to correspond with the judicial record sent with the prisoner from the criminal court, and all the individual registers should be arranged in regular sequence and be in loose sheets, properly docketed and indexed, so as to be susceptible of rapid consultation and examination in case of need.

The particulars noted in the judicial record need not be repeated in the prison sheet, but all particulars connected with his prison life should be carefully recorded in it under separate heads in as great detail as may be found practicable.

These I have noted in my previous remarks, but in addition to them I would note the points laid down by the Anthropometic Committee recently formed by the British Association. These are, his height in inches and eighths; his weight in pounds on admission and discharge; the colour of his eyes and hair; and the exceptional measurements of the chest, the strength, sight, and hearing.

If collected and recorded at the examination of each prisoner, before he is consigned to his cell or to the work allotted to him, these particulars would not give much additional trouble to prison authorities.

As this question of the particular form of international prison registers will doubtless be discussed in minute detail at the approaching Statistical and Penitentiary Congress, I will not refer to it further in this place.

Finally in the wise words recorded by the International Statistical Congress of London, "The statistics of crime and "criminals are never intended to gratify an idle curiosity, but to "furnish most valuable lessons and warnings; and no effort should "be spared in the collection of such statistics to evolve from them "the most valuable suggestions for moral and legislative reform."

Discussion *on* Dr. Mouat's Paper.

Dr. Guy thought that all who had experience of criminals would agree with Dr. Mouat, that the basis of criminal statistics must be the unit, or the criminal man, and that they should get all the information possible about his antecedents, his conduct in prison, and (if it were possible to trace him afterwards) his conduct when he became a free man. He thought that the description of the unit in convict prisons was brought as near perfection as it could be. Nothing seemed to be omitted in his description. The art of photography had been brought into play, and was found of great service in this country in identifying criminals, and he understood that measures were being taken to extend the use of this means of identification to other civilised countries; so that police officers throughout the world, furnished by means of books of photographs, cheaply copied by the heliotype or other like process, would be able to identify those men, who, when they find their own country "too hot" for them, emigrate to other countries, there to carry out their nefarious projects. He hoped the time was not far distant when, by the aid of science, the criminal would be so followed up and identified, that it would scarcely be worth his while to be a criminal at all. There were already evidences that crime was on the decrease. The more serious crimes were diminishing, and the les important crimes were not so numerous as they were. The questio of uniform criminal returns was an international one. His impression was, however, that the coming together of a number of representatives of different nations, for the purpose of setting down on paper the things they should like information upon, would not lead to very important results.

He believed that England in this, as in many other subjects, was teaching the nations how to live, and it would be better if by doing its own duty more and more perfectly it furnished an example by which the other nations might be guided. Dr. Mouat had advocated the recording of international criminal statistics quinquennially, but whatever other nations might do in this matter, he would again advocate for England the taking of a biennial census of all the persons locked up in the prisons, workhouses, lunatic asylums, hospitals, and all these public institutions. This would be immensely valuable; and he thought that, as a Society, they ought to aim at procuring such biennial statements. After expressing his great satisfaction at the admirable paper laid before the Society, and stating that he did not wish to undervalue the attempts that were made at home and abroad to bring about a uniform system of criminal statistics, Dr. Guy again insisted that England should do her own work, and become, as far as possible, a model for other nations to follow.

Colonel Du Cane said that Dr. Mouat's proposal for international prison statistics was a step in the right direction, even though all he desired might not be yet attainable for various obvious reasons, but by aiming sometimes higher than the object to be attained some lower mark could be achieved more easily. Dr. Guy had almost taken the words out of his mouth when he said that attention should first of all be devoted to perfecting the statistics in this country. A very good commencement had been made, because by the co-operation of those concerned, the convict prison statistics had been got into very fair order. As far as he himself was concerned, he had tried to eliminate from them everything that was useless or misleading, and to retain that which could be made, and was made, absolutely accurate; but with regard to the county and borough prisons nothing like the same system and uniformity had been introduced, because they were under so many different authorities and governed by so many different people. It was a subject to which he thought the Statistical Society and all those who were interested in it might very well devote their attention. The charge of the registering of criminals, which was very much connected with the subject under discussion, had lately been committed to him, and he had been considering what means might be introduced to make the system more perfect. The object of the criminal registers was to keep a perfect account of every habitual criminal, almost like the bank notes that are sent out of the Bank of England. He believed that the first attempt made to establish the register aimed at greater perfection than it could attain to, and than could be useful, and in point of fact it defeated its own object. The Act for the Registration of Criminals decreed that *every* person who committed a crime, such as is defined within the Act, should be registered according to some form or another. The result of that was that during the few years the register had been in operation, there were something like 170,000 names on the register, and they were increasing at the rate of 28,000 or 30,000 every year. Very little consideration would show that that would represent many more than those who ought to be registered, and the mere bulk of the thing was such that the useful part became absolutely smothered in that which is useless. He mentioned, as an illustration of the result of excess of registration, that at Berlin, where they had carried out something of the same kind for several years past, there were twenty large rooms full of registers of criminals. His object had been to cut down the criminal register to that which would make it available and practically useful. To show that this was possible, he would mention the fact that although there were 170,000 names upon the register, yet the whole number of known thieves and depredators in England was not half that number, even including those in prison; and yet new names were coming in at the rate of 28,000 a-year. But only those who were habitual thieves were worth noting. He had the number of criminals registered under the letter A gone through, and he found upwards of 3,000 names; only 350 of which were entered on the register twice, and only 89 three times, during six years. Probably only these 89 were worth registering at all, therefore there was immense room for cutting down useless registration. As an example of a useful object he hoped to achieve by the register, he mentioned that having been told that there were certain branches of the criminal trade which were only followed by a special number of people, he had directed special attention to them. There were, for example, only a limited number of coiners, and he had been told by the chief of the detectives that to be a first-rate burglar was a position that very few could fill. It was something like being the general of an army (laughter), it required energy, skill, and daring, and the number of such persons in England was very limited, so much so, that if they should all be accurately described and photographed, and such descriptions and photographs circulated, they could not escape detection; it would be quite possible to make the country too hot to hold them. Some such proceeding as this was necessary, because these burglars and others took advantage of the facilities of railway travelling: men committing a burglary in London, for instance, might be men living in Birmingham, who would return there by train in the morning; and if little books containing the photographs of these people could be circulated their faces would become known. Some of the greatest robberies committed within the last few years had been by gangs of foreigners, as well as by people who came over from Ireland: therefore if there were international communication among the police as to criminals, with the interchange of such books of photographs as he described, it would be a great advantage. Whether in the course of time the best principles in dealing with criminals would be established by these international statistics, and be generally adopted he did not know; but it was a result much to be hoped for, and a matter that they should do their best to accomplish.

Mr. ELLIOTT said he widely differed from some of the remarks that had been made. He should like to know how the prisoners were treated in prison; because that was a part of the question which had been avoided. It would be little use to tell us about hospital practice if we were specially told of the treatment of the patient under which he had got well. There were two kinds of opinion as to prison treatment, the exoteric and the esoteric, and these were widely different. Unless the treatment of the offender in prison was explained, all the statistics and returns and registers would go for nothing. That treatment should be according to common sense and human instincts. Experience from the earliest time to the present moment had shown that when an offender or evil doer was put in prison he must be hurt in one way or another, so that when he went out he would say, "I shall not go there any more."

The PRESIDENT, referring to the remark of Dr. Guy, that comparisons with international statistics would not be of much avail in improving our criminal statistics, said he was of opinion that it was very important to get clever men to meet together from different countries, because many improvements were suggested, as for instance, the hints that had been thrown out by the United States on the silent system.

Mr. Millar thought that Dr. Mouat had fully established the importance of international statistics, but there was a difficulty which existed in regard to the changes that took place. There was not only a population of recommitments but a population committed for varying periods for the same crime in different years, owing to changes in legislation, and the difficulty was to eliminate such cases from the others. Another difficulty was, that even in our own prisons the variations were very great. Even the cost of prisoners varied greatly, and that would, to some extent, vitiate the statistics. The recommitments were a very important item, and one which would also be affected by the degree in which subsequent police supervision could be carried out. He thought the subject was an important one, inasmuch as, next to the army and navy, prisoners were, perhaps, the most accessible class for Government statistics; but the period of observation was comparatively short, and the same men might occur over and over again.

Dr. Farr, while expressing his thanks to Dr. Mouat, who had done so much for prison statistics, said he was in opposition to Dr. Guy to a certain extent, as he thought international meetings would be advantageous. That should not stop our own action. If this country compiled its criminal statistics in the best way possible, in due time other countries would imitate us. Something had been said of the unit the figures represent. That was all-important. But here we have several units. There are the crime, the place, the criminal, the committal, the punishment. The analysis of these units, and the deductions alike required the utmost care. Take, for instance, one example adduced by Lord Aberdare in his eloquent address before the Social Science Congress, at Brighton. Dr. Hancock, who is an accomplished statist, and who writes the reports on Irish crime, was rather pleased to repeat, year after year, that crime was less prevalent in Ireland than in England. He and some others had looked into the matter, however, a little, and found the importance of further analysis. There were 31,950 criminals committed in Ireland in 1873, and 127,000 in England, so that there appeared to be fewer offences committed in Ireland than in England. But they found, on further inquiry, that a large proportion of the crime in England was committed by Irishmen. The criminals of Irish birth committed in England 22,000 crimes, and 32,000 in Ireland, making a total of 54,000. Comparing that with the Irish population in Ireland, and the Irish population in England, there were 5,873,000 Irishmen committing 54,000 crimes, making 9 per 1,000 committed by the Irish, some in Ireland and, a large portion in England. On further calculation it was found that there were 6 per 1,000 of the English committed for crime annually, and above 9 of the Irish; the difference due to the fact that although there was less crime committed in Ireland, yet a large proportion of crime in England was committed by the Irish. The causes of this are more difficult of discovery, and require further analysis. The difference is probably not due to race, but to external circumstances. Crimes differ in character in a rich and a poor country. It is difficult, for instance, to pick empty pockets, or to steal immovable property. Lord Aberdare adverts to some important facts, which have to be taken into account in any just comparison of the criminality of the various parts of the United Kingdom; and there are many others the statists have to weigh in dealing with the criminal statistics of people of other States.

Captain Cragie called attention to the anomalous state of our county and borough gaols. There were, in fact, in this country two systems of prison management, one of which was, by its nature, incapable of being made use of for tabulating results. Some immediate legislation was necessary to put on a fair and proper footing those scattered, isolated, uneconomical gaols which were to be found all over the country, so that there should be one prison system only. Having that one system, there would then be one system of prison statistics.

Mr. Hammick said it would be most desirable if one period only were fixed for criminal statistics. In dealing with borough and county gaols the year ended on the 29th September, whereas, in dealing with Government prisons the year ended on the 31st December.

Rev. J. Long said he had been in Bengal, and in former times the common people there viewed the gaol with so much pleasure that they named it their "father-in-law's house." He thought it would add to the value of Dr. Mouat's statistics if to them were added the view taken of the gaols by the common people.

Dr. Mouat, in reply, observed that there was not much in the discussion which called for special remark from him. The observations of Dr. Guy and Colonel Du Cane in reality supported his view of the usefulness of an international system of prison record, inasmuch as once the habitual criminals of all countries became generally known, the police authorities of the whole world would be banded against them, and the difficulty of a career of crime would become so great as to restrict materially the number of successful criminals. Dr. Mouat considered that Dr. Guy underrated the influence of international congresses of the prison experts of all countries in shedding light upon the merits and defects of different systems of prison discipline and management. No one could have attended the Prison Congress held in London, in 1872, without seeing how much real good was effected by the interchange of views between the representatives of the penal administration of all civilised nations.

The observations of Mr. Elliott were so entirely out of place as to need no reply, inasmuch as the paper referred exclusively to the means and methods of collecting and registering the facts connected with crime and criminals, and advisedly pronounced no opinions upon systems of penal discipline.

Dr. Mouat was also somewhat at issue with Colonel Du Cane as to the uselessness of collecting more statistics than were of immediate use. It was scarcely possible to say what would be useless in the collection of facts, and incomplete statistics were certainly calculated to mislead—hence he deprecated the restriction adopted by Colonel Du Cane. A record of the history of every person charged with crime was necessary to the right understanding of the causes of criminal acts, and although, out of many thousands a very few might prove to be habitual criminals, penal legislation was not intended to deal exclusively with this class, but to include in its range all who set the law in movement. By this means alone, the aim and object of all such laws—the protection of life and property by the correction and punishment of offenders—would be secured.

Our own system was not so perfect as to be insusceptible of improvement, and while other countries could undoubtedly borrow much that would be of advantage to them from us, we might in return profit by such of their arrangements as were better than our own. A good system of international prison statistics alone could enable this to be accomplished.

STATISTICS RELATING *to the* SUPPORT *of* RELIGIOUS INSTITUTIONS *in* ENGLAND *and* WALES. *By* HERBERT S. SKEATS, ESQ.

[Read before the Statistical Society, 21st March, 1876.]

MY subject to-night is "Statistics relating to the support of "Religious Institutions." By "religious institutions" I mean public societies having for their object the advancement of the Christian religion and the support of the various places of worship connected with that religion. It will be best, perhaps, to consider the latter branch of the subject first.

There have been no recent authentic statistics concerning the number of places of worship in England and Wales, but it is not difficult to arrive at an estimate of the number that will be approximately correct. When the census of religious worship of 1851 was taken, it was found that there were 14,162 places of worship connected with the Established Church, and 20,569 connected with other churches. There has been a large increase since that period. In the diocese of London the number of places connected with the Established Church has increased from 486 to 559; no fewer than 124 new churches have been built in the diocese of Durham since 1851; the number in the diocese of Winchester has increased from 668 to 791, and so on. In all England there are now probably not fewer than between 18,000 and 19,000 such places of worship, of which the number of *consecrated* edifices is about 16,000. Of these, 2,560 have been consecrated within the last forty years, and 4,210 between the years 1801 and 1873.*

Besides the consecrated edifices, there are in all dioceses licensed buildings used for temporary worship. I assume, from such returns as are given in the Diocesan Calendars, that the aggregate number of these cannot be less than 2,000. The growth of church building in connection with the Church of England during the last twenty-five years has been unexampled in the ecclesiastical history of this country.

Very similar has been the increase in the number of places of worship connected with other churches. Although there is an absence of authentic returns for the whole of the denominations, it is possible, here also, to obtain a fairly accurate knowledge of their rate of increase and of their present number. Thus I find that the Wesleyan Methodists of the Old Connection have increased from 6,579 to 7,500; the United Methodists from 778 to 1,210; the Methodist New Connection from 297 to 417; the Primitive Methodists from 2,871, to Connectional chapels numbering 3,918, or including other places to 6,445; the Calvinistic Methodists, from 828 to 1,197. The Congregationalists have increased from 3,244 to 4,113, the Baptists from 2,722 to 3,217, the Unitarians from 229 to 320, and the Roman Catholics from 570 to 1,061.

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* House of Commons' Committee on Public Worship, 1874. 21,691, 3,389, 3,390.

These denominations alone number nearly 25,000 places of worship. I should say that it would be a moderate estimate to place the whole number of places of worship, not connected with the Established Church, at upwards of 28,000.

Next, as to the support of the means of religious worship. Two systems are in operation in this country, and run, to a great extent, side by side. They may be termed the fixed, and the voluntary systems. The fixed include, in respect to the Establishment, rent-charges in lieu of tithes, small tithes, and endowments of various kinds. In respect to the Nonconformist churches, there are a few endowments only, here and there, in connection with some of the older churches, but for the most part of inconsiderable amounts.

As to the origin of tithes, little need be said. Probably Dean Hook's account will be accepted as a reliable one. After referring to the Old Testament practice, to voluntary offerings, and to the canon passed at the Synod of Calcuith in this country, that learned writer says, "In obedience to these and other canons, tithes were "paid here in some particular places; but King Ethelwolph, who "was the first hereditary monarch of the English Saxons, made a "voluntary donation of tithes to be paid throughout the kingdom; "and this was done in a general council, with the free consent of "the spiritual and temporal lords and a multitude of other people; "and it is for that reason that some ancient writers tell us that the "tenth part was granted *a Rege Baronibus* and *Populo;* but that "must be a mistake, because all the lands in England were then "desmesnes of that king alone, and therefore when he granted "*decimam partem terræ meæ*, that must be the tenth of the profits of "the lands throughout the kingdom . . . which decision and grant "was confirmed by many of his successors, even to the time of "Edward the Confessor, who made a law that the tenth of all corn "shall be paid to God, as due to Him, and tells us in what manner "both prædial and personal tithes ought to be paid; and that if any "person should disobey that law, he should be compelled to pay this "duty by the king and the bishop, and thus it stood till the "Conquest."*

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* "Church Dictionary;" Art. Tithes.

The bishoprics and cathedrals are supported on the fixed system; the former are now endowed, according to Act of Parliament, with the aggregate sum of about 155,000*l.*; the latter with, as nearly as can be ascertained, about 300,000*l.* per annum.

The rent charge payable to the parochial incumbents amounted, at the last return, to 2,410,000*l.* This, although it is an undoubtedly large amount, cannot form anything like the total revenues of the Established Church. These have been largely supplemented during late years by the Ecclesiastical Commission, who have already permanently set aside from their revenues the annual sum of nearly half-a-million sterling in aid of the augmentation of benefices alone. The Governors of Queen Anne's Bounty distribute for a similar purpose more than 100,000*l.* a-year. In nearly all the old, and in several new parishes, there is a considerable extent of glebe land, which belongs to the incumbent, but what that extent is, or its value, has never been officially ascertained. In his evidence before the House of Commons' Committee, the Secretary of Queen Anne's Bounty stated, that the value of the livings as given in the "Clergy List" amounted to 3,719,000*l.*; at the same time adding that, probably, that sum should be increased by 10 per cent. My own impression is that a much greater addition than this should be made to the figures in the "Clergy List." If those figures are compared with the values of livings as given at the sales of advowsons and next presentations, it will frequently be observed that there is a wide difference between the two. Thus, when the living of Falmouth was sold, though it was stated by the auctioneer to be worth 1,750*l.* per annum, the value given in the "Clergy "List" at that time was only 570*l.* The living of Ditchingham was stated at 600*l.*, in the "Clergy List" it was 482*l.*; the living of Spettisbury at 800*l.*, by the "Clergy List" at 517*l.* There is now a next presentation to the rectory of Snailwell, near Newmarket, for sale, the net income of which is stated to be about 700*l.* a-year, with a parsonage, but the "Clergy List" gives the value at only 535*l.* Illustrations of this nature might be multiplied. I should say that a wide and careful investigation would prove that something like twenty-five per cent. should, on an average, be added to the value of the livings as given in the "Clergy List," which would raise the fixed income of the parochial clergy to rather more than 4,500,000*l.* a-year.

It will be obvious that this sum would not be sufficient to support the clergy as a body, much less to provide the expenses of service and other ecclesiastical expenses, as well as the occasional charities which are distributed with the hand that has been opened by human pity or christian affection. Nor does it. Many of the clergy, as is known, have private means, and many give back to the church, or to the people, what they have been legally entitled to receive. In recent years pew rents and offertories have been added to the sources of clerical income. Pew rents, while they have been the ordinary source of the incomes of nonconformist churches, may be said to be an innovation on the system of the Establishment. They were first authorised by the Church Building Act of 58 George III, cap. 45, and have been subsequently dealt with by the 59 George III, cap. 104, and 3 George IV, cap. 72. The amount that may be levied in any church built under these Acts is fixed by the Ecclesiastical Commissioners. As an illustration of this system, it may be stated that in the year preceding the first of November last, the Commissioners fixed and assigned to the minister the amount of pew rents for the following Churches:—

	£	*s.*	*d.*
Blackburn, St. James	84	4	–
Brixton Hill, St. Saviour	507	10	–
Brownswood Park, St. John	280	5	–
Carnarvon, Christ Church	345	5	–
Hastings, Emmanuel	231	–	–
South Vale, St. Michael	463	8	–
Stoneycroft, All Saints	415	1	–
Toxteth Park, St. Philemon	271	2	6
Weybridge, St. Michael	282	–	–
Woodford Wells, All Saints	283	–	–

The whole of the pew rents in these and other instances is assigned to the minister; the expenses of worship, and other expenses being met by collections and subscriptions. In 1867 the average pew rents of sixty-seven churches in the parish of Manchester was 184*l.* There can be no doubt, however, that this method of obtaining money for the support of the ministers of God's Word is unpopular with a large section in the Church. In recent years an earnest endeavour has been made to substitute for it the system called the "offertory" system, which has been ably advocated by several essayists, and has often been discussed at various meetings of the Church Congress. At the meeting of the Church Congress at Brighton, in 1874, the Rev. Dr. Hannah, the vicar of Brighton, said: "It is the practical experience of the "Church, during the last few years, that the offertory, in the long "run—not always at first—is a very great deal better, financially, "than pew rents." When, in 1869, the Chester Diocesan Association made an inquiry into this subject, it was ascertained that such results had undoubtedly followed the abolition of pew rents. In one church the offertory yielded double the value of the pew rents; in fifteen churches the aggregate sum rose from 2,000*l.* to about 5,500*l.* The "London Free and Open Church Association" recently conducted a similar inquiry, and have published the results in a report to which I am indebted for many of the above and following figures. They obtained returns of the amounts contributed at the offertory by 450 churches in London and the country. The returns were for three years up to 1875. The following are taken from country dioceses:—

	£	£	£
Buxton	805	910	987
Clifton, All Saints	4,691	6,292	5,256
Croydon, St. Michael, about	1,000 a-year.		
Folkestone, St. Mary ,,	1,000	,,	
Devonport, St. Margaret	1,025	1,312	1,504
Malvern Priory	990	1,020	1,224
Scarborough, St. Martin	1,270	1,207	1,380
St. Leonards, Christ Church (two years)	2,419	2,173	

These are the highest amounts, but sums of 700*l.* and 800*l.* are frequent. The following are specimens from London churches:—

	£	£	£
St. Albans, Holborn	1,600	977	831
All Saints, Margaret Street	2,355	2,348	2,246
St. Andrews, Wells Street	3,188	3,230	3,249
Christ Church, St. Pancras	1,358	1,316	1,426
St. Cyprian, Dorset Square	1,678	1,378	1,123
St. Matthew, Upper Clapham	970	1,020	1,050
St. Matthias, Earl's Court, about	3,000 a-year		
St. Matthias, Stoke Newington, about	1,100	,,	
St. Mary Magdalen, Paddington	6,906	4,659	6,654

Besides these there are special collections for special purposes, the amounts of which are not stated, but in one church, St. Mary's, Islington, where the offertory is used, the special collections amount to 400*l.* a-year. The average per church in fifty large town congregations is nearly 400*l.* per annum each; for fifty country congregations, 111*l.* annually; for fifty London congregations, nearly 500*l.* a-year each. The Diocesan Calendar for the Diocese of Lichfield contains statistics of the sums contributed in that diocese by 316 churches. I find amongst them the following:—

	£
Colwick	1,286
Kingsborough	1,371
Northwood	805
Sedgley	1,100
Stafford, St. Chad's	1,800
Walsall, St. Matthew's	2,170
,, St. Paul's	825
Wolverhampton, St. Peter's	1,200
,, St. Mark's	1,591
Derby, St. James's	2,258
,, St. Luke's	3,512
Bradwell	1,294

The aggregate amount contributed by the 316 churches was nearly 86,000*l.* or an average of about 240*l.* per church.

Now it is impossible to generalise with confident accuracy from such figures, but we know that there are in the diocese of London 559 church edifices, and if in these the congregations contributed at the rate of those just referred to, they would contribute, in this way alone, nearly 280,000*l.* a-year. If we were to put the average throughout the kingdom as low as 111*l.*, the average of the country districts alone, we should obtain a sum of nearly two millions and a-half; but I think, looking especially at the Lichfield diocesan statistics, it must be obvious that the average should be higher than this. I should estimate the aggregate amount at more than four millions, and this, it will be understood, would not include private subscriptions.

It is more difficult in some respects to state the sums contributed by Nonconformist churches, and it is not possible always to give them in a uniform manner. With the exception of one or two denominations, there exist no general statistics relating to church finance. Where I have endeavoured to obtain them, I have for the most part failed, and failed from the necessity of the case, there being, with some exceptions, no central authorities, and no great number of known facts. It is to be considered, in estimating the sum in this section, that the Nonconformist bodies have an obligation imposed upon them which, in the larger majority of cases, is not imposed upon members of the Established Church; they have to support their own ministers, and therefore to find, in addition to the several purposes for which money is generally obtained from church congregations, money for this most costly purpose. Now, I suppose, that the Primitive Methodists have embraced more of the very poor in their denominations than any other Nonconformist body, and I find that there was contributed by that body in the year 1874 the following sums:—

	£
For missionary purposes	35,207
„ the maintenance and erection of chapels	242,622
„ the support of Sunday schools	45,477
„ the support of ministers, not less than	100,000
Total	423,306

The United Methodists are also not a rich body; their yearly contributions from 1,210 churches have amounted to 196,399*l.*

These are two of the poorest denominations connected with the Nonconformists.

The Wesleyan Methodists' body of the Old Connection is larger and richer than either of these, but I have not been able to obtain its full financial statistics. The following sums were contributed in the year 1874-75 for the purposes named:—

	£
Foreign missions	174,000
Chapels and buildings	262,292

The last sum is about the average amount yearly contributed by this body for the purposes specified.

The Congregationalists are a comparatively wealthy body; the Baptists less wealthy, but equally zealous. In the case of the former denomination it has been estimated that about 800,000*l.* is contributed for all purposes,* but I am disposed to think this an under estimate, especially when it is compared with the sums contributed by the Baptists—a smaller and a less wealthy denomination.

I am indebted to the secretary of the Baptist Union (the Rev. J. H. Millard, B.A.) for very full statistics relating to that body, or rather to the greater portion of it, as follows:—

	£	£
For church edifices—		
New chapels	58,804	
Enlargement and schools	62,440	
Debts diminished	47,213	
„ liquidated	7,997	
		176,454
For home missions		15,437
„ foreign „		62,342
„ colleges		15,655
„ poorer ministers, widows, &c.		17,831
„ poor church members (estimate) 10*l.* per church average.		26,000
„ support of ministry (estimate) 80*l.* average.		160,000
		473,719

These figures are from returns furnished by three-fourths of the total number of churches, and would lead one to infer that, excluding subscriptions, about 630,000*l.* is annually raised by the Baptist body.

The Unitarian is a small but wealthy body. The following estimate for last year is made by the Rev. Robert Spears, late secretary of the Unitarian Association:—

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* Letter of Mr. A. Common to the "Nonconformist" newspaper, 26th April, 1876.

	£
New chapels	32,000
Expense of worship	10,000
Aggregate for all purposes	128,000

This would give an average of 4*l.* per head of the adult population that attended Unitarian worship.

Very striking are some of the contributions made by individual churches. I find, for instance, that at the Metropolitan Tabernacle the sum of 7,734*l.* was given last year for various purposes, besides 7,000*l.* received, but much of it from external sources, for the Orphanage and College connected with that Church. The sum contributed by the congregation of the Bloomsbury Baptist Chapel, in the same period, was 2,833*l.*; by the Clapton Baptist Church, 2,831*l.*; by the Tottenham Court Road Church, 2,300*l.*; Blenheim Road, Hornsey, 1,714*l.* Independently of the minister's salary, the Congregational Church at Blackheath contributed about 2,500*l.*; the United Presbyterian Church, Forest Hill, 1,534*l.*; Union Chapel, Islington, for building purposes, 14,000*l.*, for ordinary purposes more than 3,300*l.*; Adelphi Chapel, Hackney, 971*l.*; East London Tabernacle, 2,400*l.*

In the country I find that the Princes Street Congregational Church at Norwich contributed 3,340*l.*; the Oxford Road Baptist Church, Manchester, 5,700*l.*; Belgrave Church, Darwen, 1,225*l.*; Huyton Congregational Church, Liverpool, 791*l.*; Duckworth Congregational Church, 1,050*l.*; Buckingham Church, Clifton, 1,680*l.*; Angel Street Church, Worcester, 1,843*l.*; St. James', Newcastle, 935*l.*; the Free Church, Caversham, for special and ordinary purposes, 2,126*l.*; Charlton Road, Manchester, 1,823*l.* The thirty-nine churches constituting the United Presbyterian Presbytery of Newcastle contributed for all purposes, in the year 1875, the sum of 17,229*l.*, or an average of 416*l.* per church.

What would be most interesting to ascertain in regard to these and all similar statistics, is the proportion of contributions to attendants, but here, unless made upon a very large scale, any deduction would be misleading. I have many statistics, and their result has somewhat surprised me. It is not at all uncommon to find, amongst wealthy churches, an average contribution for ordinary purposes of 4*l.* per attendant; in very many the average is upwards of 2*l.*, while the smaller country churches, which, however, are the most numerous, often exceed 1*l.* Specimens of such country churches may be found in the Congregational Church at Alton, which contributed 244*l.*; the Congregational Church at Buckingham, which contributed about 360*l.*; or the Baptist Church at East Dereham, which contributed 454*l.* The Nonconformist churches of Berkhampstead raised for religious purposes last year a total of 1,988*l.*

With the exception of certain well-known and wealthy congregations, who, as well as the poorer, however, have to be taken into account in drawing an average, I should be disposed to estimate the average contributions of attendants at all Nonconformist churches at 1*l.* per head per annum, or about 200*l.* per congregation. This would give a yearly aggregate of nearly six millions sterling, which I believe to be about the sum contributed.

With regard to public religious societies, the following, having their central offices in the metropolis, were the sums given for the various purposes stated in the last financial year of the respective societies:—

	£
71 Church and chapel buildings	71,730
4 Bible societies	228,418
10 Book ,,	59,857
4 Tract ,,	17,384
62 Home missionary societies	414,010
10 Home and foreign missionary societies	126,765
21 Foreign missionary societies	761,000
Total	1,678,164

Of course much of this is included in the incomes of the churches, and to add the two together would be to use the same sums twice over. There are no means of accurately distinguishing between the various sources of income, but it is certain that a large proportion of the revenues of societies is derived from yearly individual subscriptions, independently of collections.

These figures include the greater portion of the contributions to public religious societies. The most prominent exception is the item relating to church building. There are large numbers of provincial church building societies, and the amounts received and distributed by them would be found, I believe, to equal if not to exceed, the sums contributed to the metropolitan societies. The (amended) return procured by Lord Hampton of the sums of money over 500*l.* that have been spent in the building and restoration of churches since 1840, show to some extent what has been done in this direction. This paper would not be complete without quoting the aggregate figures of this return:—

	£
Bangor	161,312
Bath and Wells	728,349
Canterbury	917,399
Chichester	748,389
Ely	884,941
Exeter	782,305
Gloucester and Bristol	992,883
Hereford	443,641
Lichfield	1,177,584
Lincoln	972,643
Llandaff	145,111
London	2,770,816
St. Paul's Cathedral	62,203
Norwich	727,213
Oxford	1,305,357
Peterborough	674,081
Rochester	1,413,924
St. Asaph	408,371
St. David's	374,453
Salisbury	930,000
Winchester	2,042,873
Worcester	1,127,101
Carlisle	391,498
Chester	1,119,320
Durham	687,109
Manchester	1,510,826
Ripon	954,622
Sodor and Man	26,220
York	1,291,336
Grand total	25,548,703

This return would have been of still greater value than it is if it had been made upon a uniform plan. As it is, it is impossible to arrive at any detailed results that would be especially valuable for statistical purposes. In some dioceses the number of edifices is not given, no distinction is made between repairs and building, and none between sums contributed by voluntary contributions and sums levied by Church rates. I should judge from this return, and the figures I have already given, that Churchmen and Nonconformists contribute for church building purposes about an equal amount.

It is sometimes interesting to compare ourselves with others, and in regard to this subject there is a possibility, to some extent, of doing so. A comparison with Scotland is apparently not favourable to the religious generosity of the English people. The Free Church of Scotland, with 920 churches, raised last year 525,424*l.*, or an average of 570*l.* per church; the United Presbyterians, with 616 churches, raised 364,023*l.*, or more than 590*l.* per church.

An apparently reliable statement of the amount raised in the United States by the Protestant Churches only of that country would also indicate that our contributions are not excessive. In 1872 the five leading denominations raised for benevolent purposes as following:—

	$
Baptists	3,391,276
Congregationalists	4,000,000
Episcopalians	6,304,608
Methodists	17,427,184
Presbyterians	11,070,325
Total	42,193,393

The contributions of other Protestant Churches, it is stated, would increase this amount to 50 million dollars, or about 10 million sterling.*

We have not, therefore, much of which to boast in comparing ourselves with others, but the figures which I have produced, however inadequate, are, I think, a magnificent testimony to the public benevolence and religious zeal of the English people. There are some matters, however, which one would like to see improved. When churches are raising money for costly buildings and furniture, perhaps it would be as well if they could remember more frequently, and more liberally, the claims of destitute pastors. The Poor Clergy Relief Society, which supplies money and cast-off clothes to distressed clergymen, has an income of only little more than 4,000*l.*, and similar societies connected with some Nonconformist bodies are no better supported. "This ought ye to have done, "and not leave the other undone." But perhaps it is ungenerous to criticise the forms of generosity, especially when, as in this country, their result has mainly contributed to give it its character and influence amongst the nations.

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* Thompson's "Church and State in the United States," p. 110.

DISCUSSION *on* MR. H. S. SKEATS'S PAPER.

THE REV. MR. SPEARS (late secretary of the British and Foreign Unitarian Association) said he had been asked a short time ago to supply some statistics with reference to the body to which he belonged. Not being aware that the meeting was to be held so soon, he had hastily prepared the following statistics:—The Unitarian body had about 320 places of worship in England and Wales. Two-thirds of these had Sunday schools. There were an average of 30,000 adult persons attending the various meetings every Sunday, and about 20,000 Sunday school children. Within the last twenty-five years about 130 of their places of worship had either been founded, or rebuilt or renovated, 60 of which were entirely new. In 1875 the erection of new buildings cost about 29,000*l*., and the repairing of the old buildings about 3,000*l*., making a total expenditure of 32,000*l*. The amount spent upon the 320 chapels or churches for the support of religious worship and for the instruction of children in the Sunday schools amounted to about 70,000*l*. The amount expended in colleges and training schools in England and Wales was about 4,000*l*. a-year; and there were stipend augmentation funds, the income of which was 3,000*l*. a-year. The income of twenty-five missionary societies amounted to about 12,000*l*. a-year, with the exception of last year, when the income was considerably larger. There were five domestic mission institutions for employing ministers to visit the homes of poor people, to induce them to send their children to school, &c., which cost the societies about 4,000*l*. a-year. The various benevolent funds connected with the different churches contributed about 2,500*l*. a-year; the Sunday School Associations raised about 500*l*. annually; and, according to the reports of 1875, the amount contributed for all purposes was nearly 128,000*l*., making an average of about 4*l*. 5*s*. for each adult person who attended the different places of worship. He asked permission to have his statistics published in the *Journal* of the Society. Mr. Spears thought that if Mr. Skeats could show the relative proportion of people who attended places of worship now as compared with twenty-five, fifty, seventy-five, or one hundred years ago, it would be a very interesting addendum to his paper. (Mr. Skeats was afraid that such statistics would not be very easily obtainable.)

Sir RAWSON RAWSON thought that if the offertory of the various churches at the present day was examined, it would be found to fall very far short of the donations for special purposes. He had lately had the accounts of a church before him, and he certainly found that the amounts collected for various purposes within the parish were three times the amount of the offertory. He had no doubt that the same could be said of the nonconformist bodies.

The Rev. Dr. Badenoch agreed with the observations of the last speaker, and thought it would be interesting to know the amount contributed per head by the members of the respective denominations, although he was quite aware that Mr. Skeats was not able to give such statistics from the defective way in which the census for 1861 and 1871 had been made out. This was an anomaly in England and Scotland which did not exist in Ireland. If the same statistics could be obtained for England and Scotland as were obtained for Ireland, the amount contributed per head by all denominations could be ascertained. He hoped the Society would endeavour, when the next census was taken, to obtain as full statistics for England and Scotland on this head, as had been obtained for Ireland.

Mr. Lumley, Q.C., said that perhaps the gentleman who had spoken was not aware of the trouble and labour which had been taken by the Society in obtaining a religious census in past years. Parliament had hitherto refused its aid to the making of such returns. The religious census of 1871 was not properly taken. It was merely a paper drawn up by Mr. Horace Mann containing as much information as could possibly be obtained by him; but it was objected to on the ground that it was not authentic, inasmuch as it was not authorised by the Commissioners. The return of the Registrar-General of the chapels registered from year to year of the different denominations was no doubt authentic, and could be relied upon, and probably Mr. Skeats would say whether it was that return he relied upon when he stated the number of chapels that had been built since 1871. With regard to the offertory, his own experience had taught him that it was not wholly devoted to religious purposes, but that a large proportion of it was devoted to charity. There was also another question to be considered, namely whether any account was taken of the surplice fees paid to the clergy for other than church services which they rendered, and which fees contributed very much to their support. It was possible that the "Clergy List" only gave the amount of the tithe rent charge, and that when the auctioneer spoke of the value of a benefice he considered not only what was to be given for religious services, but also what was received on account of marriages and births. Mr. Skeats had given a long list of places, from which returns were given of the considerable amounts contributed by the offertories, and such places had been placed as among the poor congregations, but from what he (Mr. Lumley) knew of these congregations they were not poor, but on the contrary the members were exceedingly wealthy. The paper itself he thought was very interesting, and would very likely lead to a more elaborate one on the same subject on some future occasion.

Mr. Glover expressed his scepticism in regard to such statistics as had been brought out in Ireland showing the amount contributed per head by the members of different religious bodies. He was obliged, as no doubt the other members of the Society would be, to the author of the paper for the way in which he had treated his subject. The author, it seemed, had taken great care to find out the extent to which the voluntary principle had prevailed, not only without but within the pale of the Establishment, and had brought out very clearly that the voluntary principle was producing fruits within the Establishment itself as remarkable as those produced without the Establishment. He confessed himself astounded at the amount that was raised voluntarily for religious purposes, the more so as these voluntary contributions took place at a time when the voluntary system was considerably discredited, even by the wealthiest of the land and, unconsciously, by the Establishment itself. It was also astonishing to him that so much of the annual national savings being given for the express purpose of promoting Christianity, the fruits produced were not infinitely more than they were. He did not mean to imply that the amount raised for religious purposes was too much, but that the fruits resulting from the outlay were inadequate.

Mr. McKenzie thought it would be interesting to know how much was paid within and without the Church of England for the hire of pews, as he happened to be churchwarden of a church in which half of the church was free and the other half was what he might call hired, and the offertory was about equal to the amount annually obtained from the rent of the pews, the whole of the income being devoted to the expenses of the church.

Mr. J. Worthy Williams said that an important item of income, especially of nonconformist societies, was left out of the paper. He should like to have the sum raised for ministers' salaries. The members of the different Wesleyan bodies were expected to pay in weekly or quarterly instalments about 8*s.* a-year for that purpose only; so that there would be raised in this way a much larger sum than was raised by the voluntary system.

Mr. Skeats, in reply to the President, said that the sum of 228,418*l.* given to the Bible Societies included the subscriptions of the British and Foreign Bible Society, but not the sales. The same remark would apply to the Tract Societies.

With reference to an observation by Mr. Millar, that it would have added greatly to the value of the paper if he had given some idea, by a table or otherwise, of the grand total the paper was intended to represent, he said he would be glad to do anything that would tend to throw further light on the subject.

In answer to a question put as to where he obtained his figures, he stated that they were obtained from the "Denominational Year Books," with the exception of the figures which related to the Roman Catholics, which were given to him by Cardinal Manning.

With reference to pew rents, he said that about twenty years ago an Act of Parliament was passed, making the pew rents compulsory, so much being paid to the minister and so much being appropriated to the other expenses; but he believed that most of those churches had abandoned the pew rents, as they found that the weekly offertory produced more than the pew rents.

And in reply to the last speaker, said he was sorry to say that the salaries of the ministers were included. He thought the ministers received about one-fourth, on an average, of the total sum contributed by their churches. For instance, if a church collected 2,800*l.*, in all probability the minister would receive about 700*l.*

Sir GEORGE ELLIOTT, M.P., while not doubting the accuracy of the statements contained in the paper, thought it would add to its value and authenticity if there were an assurance that it had passed the ordeal of strict scrutiny, and had upon it the stamp of the authority of the Society before it was presented to the outer world. While agreeing that the paper that had been read was important, he thought it was capable of considerable development.

The PRESIDENT explained that each member who brought forward a paper was responsible for the accuracy of the statements therein.

Dr. FARR said that the subject treated of in the paper was a very interesting, but, at the same time, difficult one. The matter of religious statistics had engaged the attention of several people, Lord Hampton having, not long ago, moved for a return showing the amount expended on churches during the last twenty years. He hoped that Mr. Martin would have read a paper on this subject, but no doubt he would do so by-and-bye, and his paper would form a supplement to Mr. Skeats's paper. In 1851 Parliament would not allow people to be asked what religion they were. A statement, detailing the number of churches and chapels in the country and the number of sittings, together with the number of persons who were in actual attendance on Sunday, would be more direct and positive than asking people what religion they professed. In Ireland a different course was adopted, although the census taken for that country did not give all the information that one of the speakers thought it gave. The number of Roman Catholics was said to be 4,000,000; the number of Protestants and Episcopalians 667,000; the number of Presbyterians 497,000; the number of Methodists 43,000; and all other denominations 52,253. The State of course could only ask the inhabitants of Ireland of what religion they were, and they answered it in their own way. Dr. Farr then gave instances of the names of the religious sects given by the Irish people at the taking of the census in answer to the question as to what sects they belonged, which were as various as they were curious. It would be interesting to know what proportion of the revenues of the Church was made up of the pew rents, as, contrary to the views expressed by Mr. Skeats, he believed that they were an important item of revenue in the support of ministers. He did not think the Church revenues were too high: the clergy deserved well the salary they were granted, and he should be very sorry to see them paid less than they are. The chapels had no tithes: they had pew rents, endowments, collections, and fees, and he should like Mr. Skeats to give statistics relating to these in his paper. It would also be very interesting to know the total revenue from all sources of the religious societies—such, for instance, as the Bible

Society—and also to know the sum obtained for its books and what it expended on them. He should like the same to be done with regard to the missionary societies and the undenominational schools connected with the different sects. Full information on all these points would be very desirable before the question of disestablishment was discussed.

Rev. Mr. DOXSEY, referring to the remarks of a previous speaker, said that if he remembered rightly there was in 1851 a census of the religious denominations in so far as questions were put to the officers of every church and chapel in the kingdom as to the number of persons attending worship at each of the services during the day. (Dr. Farr: that was the case.) Mr. Doxey continued: that seemed to him to be as near an approximation as could be obtained to anything like a religious census, and the Society should take steps to gain this information in view of the census of 1881. With regard to the revenue of religious societies, he thought that the returns asked for by Dr. Farr could be easily attainable. He had been informed that in the case of the British and Foreign Bible Society the amount received for sales and in voluntary subscriptions, with the amount expended on books and free gifts, were carefully distinguished in all their annual reports, which could be easily obtained by the Society if it were thought desirable to place them in the library. With regard to the paper generally, he thanked the author for the facts he had brought forward, but he thought the value of the paper would be increased if reference were given as to the sources from which the facts contained in it were derived. He thought that the question of pew rents had more to do with this question than some gentlemen seemed to imagine. Of course in country parishes, where there was only one church and the population was stagnant, the amount of tithes and the offertory for the year could easily be ascertained from the churchwarden, but this information could not be so easily obtainable in the large and increasing parishes of London. In the borough of Lambeth, where he had lived for some years, there were certainly upwards of thirty places of worship in connection with the Established Church, but so far as he knew in three of the parishes—Newington, Camberwell, and Lambeth—only the old parish churches got the tithe. The others were supported almost entirely by voluntary contributions, and some of them collected very considerable sums—in some instances certainly over 1,000*l.* a-year—and supported their ministers in a very liberal way. If in each of the metropolitan boroughs, or even in one borough, the revenues of the churches and chapels and the sources from which they are derived could be obtained, it would be a most valuable contribution to the paper. If the country maintains 100,000 public houses and beer shops in antagonism to the good intended to be done by the sums that were devoted to the extension of religion in this country and throughout the world, he did not think the church was to blame. Although there were religious institutions in the country and the country was doing nobly, there was much to humble us as a people and to prevent us from boasting of what we do.

Mr. Bourne said that what he should like to see brought out was the amount contributed by each denomination, although he rather deprecated the comparison between one sect and another. He could not sympathise with Mr. Glover in thinking that there was anything marvellous in the amount which was raised for religious purposes, when contrasted with the revenue which was derived from spirits and tobacco. He had ascertained roughly that in one year the revenue derived from the consumption of alcoholic liquors was about 32 million pounds, and the amount from tobacco was 7 million pounds, which was so much money abstracted from the pockets of the people for purposes which were certainly not allied to religion, but which were very often adverse to it. If 40 million pounds was the amount of revenue derived from the sources he had mentioned, that amount must be more than doubled to show the amount extracted from the pockets of the people in the indulgence of their appetites, and when it was considered that at the least 70 or 80 million pounds were spent by the people of this country for that purpose, they must hide their heads with shame to think that only 15 or 16 million pounds were obtained for higher purposes. The disproportion was disgraceful to us as a religious country; and he thought that a knowledge of these figures being disseminated might do much to arouse greater zeal and activity in promoting the good and repressing the evil.

Mr. Lumley explained that in 1851 what was done in the way of taking a religious census was a mere voluntary act on the part of the Commissioners, and was not required by law.

Dr. Farr confirmed this statement, and added that the Commissioners had great confidence in the results, although many seemed to think the returns were entirely fallacious.

Mr. Hammond Chubb said he was struck with the absence generally of statistics referring to the Established Church. It should, perhaps, set an example to all the other bodies, and yet it was the one about which the least was known. He thought that a great many difficulties which attached to the Church at the present day arose from this very fact, namely, that there were so few statistics that could be relied upon with regard to it. The "Clergy List" was really the only source from which the income of the clergy in various places could be obtained, and Mr. Skeats had pointed out the great discrepancy that existed between the income stated there and that which was actually received. The public would not contribute unless they had all the facts before them, and there was no doubt that the insufficient amount raised for additional curates and the miserable pittances allowed to poor and aged clergymen, both objects which would readily enlist the sympathy of the public, resulted from the ignorance of the condition of clergymen generally. It would be a good result attained if the paper or the discussion arising out of it, would lead to a clear account being given of the revenues, and the disposal of the revenues, of the Established Church of England.

The President said that perhaps it would be interesting to those present to know that the late Government of Mr. Gladstone appointed a Royal Commission, presided over by the Duke of Cleveland, to inquire into the position of the ancient bodies of Oxford and Cambridge, and the result was a vast amount of the most minute information in regard to them.

The SUPPLY *of* GAS *to the* METROPOLIS.

By HARRY CHUBB, ESQ.

[Read before the Statistical Society, 18th April, 1876.]

THE use of coal gas as a means of lighting has become so general, and the quantity required for such an enormous city as London, is now so large, that some statistics in connection with this important manufacture can scarcely fail to be of interest. The proper supply of gas having, indeed, become almost a necessity of civilised life, it may, perhaps, be assumed that interest will also be felt in the history of its introduction into London, and the constitution and obligations of the companies to whom the supply has been entrusted. It may further be presumed that no narrative can fail to be without interest which discloses from experience the policy which the Legislature seems inclined to adopt towards undertakings founded on private enterprise. This paper will therefore relate shortly the dealings of Parliament and the various local authorities of the metropolis from time to time with the several metropolitan gas companies.

London is at the present time supplied by nine companies, who have separate districts assigned to them. There were originally thirteen companies, but five of them have within the last few years amalgamated with others.*

These nine companies have seventeen manufactories, the sites of which have been selected chiefly for the facilities they afford of obtaining coals by water carriage.

The share and loan capital of the united companies amounts to rather more than 11 millions sterling, and the maximum rate of dividend allowed to be paid on the total share capital averages 8·8 per cent. (See Table I.)

There are in the aggregate upwards of a million and a half of tons of coal used every year in the manufacture of gas in the metropolis, and the quantity of gas consumed amounted in the past year to about 13 millions of thousands of cubic feet.

There are at present 54,119 lamps in the public streets in the metropolis lighted by means of gas; and the mains of all the companies, of various sizes, from 4 feet to 3 inches in diameter, reach the enormous length of upwards of 2,000 miles.

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* Since this paper was written three other companies have amalgamated. The number of companies now supplying the metropolis with gas is therefore reduced to six.

This immense trade has risen up within the last sixty years. Coal gas had been used in the provinces on some special occasions, for the purposes of illumination, for a few years previously, and notably by Mr. James Watt at his celebrated Soho engine works, near Birmingham, but it was not until the year 1807 that any attempt was made to show that such a material could be applied with advantage for the purposes of lighting in the metropolis. In that year a small apparatus was set up in Pall Mall, and from it a few of the public lamps on one side of that street were supplied with gas in order to prove its practicability and its superiority over the system of lighting by the oil lamps then in use; but notwithstanding the undoubted success of that experiment, the scheme of thus lighting even the public thoroughfares was utterly condemned, and the use of gas in dwellings was denounced as unsafe, injurious, and impracticable.

Men of science joined in this opposition, and in ridiculing the idea as visionary. Even Sir Humphrey Davy, Sir Joseph Banks, and other celebrated men of the age, lent the powerful weight of their opinions and influence to check the proceeding, and so great was the prejudice against the introduction of the new system into London, that it seemed at one time to present an insurmountable obstacle to its further progress.

The inventors, or rather those who appropriated the invention and adapted it to practical use, were, however, so fully persuaded of the great benefit and the improvement which their system of lighting would effect, that they happily maintained their views, and ultimately, at great cost, and by dint of indomitable perseverance, worthy of all praise, prevailed with a sufficiently large section of the public to enable them to extend their operations.

In 1810, after two years of severe parliamentary struggle, against powerful opposition, an Act was obtained authorising His Majesty to grant a charter within three years to a company for the purpose of lighting a small portion of the metropolis with inflammable gas, and under the powers of that Act the existing Chartered Gas Light and Coke Company, the earliest of all the metropolitan gas companies, was established. That company lost no time in erecting a manufactory of very limited dimensions in Peter Street, Westminster, then a wretchedly swampy district, frequently overflowed by the Thames, and on the 31st December, 1813, they commenced operations by lighting the lamps on Westminster Bridge. This became so great an object of attraction that the bridge is said to have been quite a fashionable promenade whilst the novelty lasted.

The authorities of the small parish of St. Margaret's, Westminster, next applied to have their streets thus lighted, and on the

1st of April, 1814, the old oil lamps in that parish gave place to the more brilliant light produced by coal gas.

Notwithstanding the evident improvement effected by the new mode of lighting the streets, the prejudice against its admission into shops and dwellings continued; so much so that the company, in order to obtain a trial, had in the first instance to furnish all the needful fittings, and supply the gas, free of expense. For nearly two years there was little or no increase in the consumption—and in addition to the public prejudice, the difficulties the company had to contend with were many and serious, both in the manufacture and the distribution of their gas. Their apparatus was necessarily most imperfect, their acquaintance with the science of gas purification was very limited, and the mode of constructing wrought iron pipes by machinery being then unknown, the greatest difficulty was experienced in providing means for conveying gas from the mains in the streets to the houses to be supplied: for some time, indeed, old musket barrels attached to each other by screwing the muzzle of one into the breech of the other, were used for this purpose, and for many years afterwards when machine-made wrought iron pipes were introduced, they were called gun-barrel pipes from this circumstance. The cost of all fittings and material of every kind was also at that time so enormously high that the hindrances and embarrassments of the period must have been well nigh overwhelming. They were, however, overcome, and when the Chartered Company had surmounted the principal difficulties, and opposition to the use of gas had somewhat abated, other companies were formed, who soon began to erect works in different parts of the metropolis.

The next undertaking in succession to the Chartered, was the City of London Gas Company, which was incorporated in 1817, for the purpose, as its name implies, of supplying the city of London. Then came the Imperial Company, in 1821, seeking to serve the whole of the north side of London, north of Oxford Street and Holborn, and outside the city.

Afterwards the following ten companies were established, viz. :—

The Ratcliff, incorporated in	1823
,, Phœnix, ,,	'24
,, Independent, ,,	'29
,, Equitable, ,,	'31
,, South Metropolitan, incorporated in	'42
,, London, incorporated in	'44
,, Commercial, ,,	'47
,, Great Central, ,,	'48
,, Western, not incorporated, but commenced operations in	'50
,, Surrey Consumers', incorporated in	'54

In all thirteen companies.

In the first instance the companies had no exclusive privileges conferred upon them as to the monopoly of the supply in any district; they were also unrestricted as to the price they might charge, as well as the rate of dividend they might pay their shareholders on the capital invested. (See Table II.) The quality of the gas to be supplied was also left to the option of the companies, who were in no way bound to furnish a supply unless it suited them to do so.

As to the exclusive right to the supply in any particular district, Parliament seems to have taken some pains at a very early period to define the mode in which gas should be introduced into London, inasmuch as they issued a commission in 1822 to inquire into this subject. This commission was presided over by the celebrated Sir William Congreve, who advocated strongly, and the commission adopted his views in this respect, that only one company should be allowed in any district of the metropolis. The wisdom of this advice has been amply proved by subsequent experience, but at the time the recommendation of the commission was not adopted, as although the companies were incorporated for the supply of certain defined districts, the exclusive supply of that area was not conferred upon them, and very soon, as soon indeed as it was proved that the speculation was unattended with risk, and that gas could be made and supplied at a profit, Parliament encouraged competitive undertakings by giving its sanction and approval to new companies; and, although the old companies had up to that time paid very indifferent dividends, as will be seen by reference to Table III, annexed, speculative investors were found willing to embark their capital in new undertakings empowered to supply districts already served, under the authority of Parliament, by the old companies.

In pursuance of this policy, the Independent Company was established, in 1829, to compete with the Imperial—the Equitable Company, in 1831, to compete with the Chartered—the London Company, in 1844, to compete with the Imperial, the Equitable, and the Chartered—the Great Central, in 1848, to compete with the two companies supplying the city—and the Surrey Consumers' in 1854, to compete with several companies on the south side of the Thames. The Western Company was also admitted by the several vestries, without parliamentary sanction, in 1850, to compete with the Chartered, the London, and the Imperial.

These several competitive companies were generally formed and promoted by bodies of consumers working in concert with the local authorities, through whom contracts were obtained at low prices for the supply of gas to the public lamps. In this manner a footing was gained in a district and competition secured.

Under this system, which prevailed from 1830 to 1857, many of the public thoroughfares were occupied by the mains of as many as four different companies, each of whom required to open the roadways frequently to make connections with or to repair their respective mains. It was of course impossible to distinguish one set of mains from another, consequently one company would frequently obtain a supply for its customer from another company's main. It was also impossible to say, when there was any escape of gas, from which company's main the leakage might be, hence all the companies opened the ground, and the surface of the road was scarcely ever at rest. The companies incurred great loss from the outlay of capital for four sets of mains where one would have sufficed, as well as loss of gas by leakage, owing to the difficulty of keeping the mains in proper repair, and the public suffered great inconvenience from the confusion naturally resulting from such a system.

The result of this competition also, so far from cheapening the supply of gas to the public, only led to increased expenditure, and eventually to an arrangement between the competitive companies to charge an uniform price, and to make the best dividends they could on their capitals, a considerable amount of which had been expended uselessly in laying several sets of mains in competition with each other.

This led to the adoption by the companies themselves generally, in 1857, of the system recommended by Sir William Congreve, viz., of dividing London into districts, each to be supplied by one company, whereby they improved their own position without in the slightest degree prejudicing the interests of the public.

The argument, that by means of competition the public would get cheaper gas, is utterly fallacious, inasmuch as, according to a very true apothegm of the late Mr. Robert Stephenson, "when "combination between two or three public companies is possible "(their number being necessarily limited), competition is impos- "sible;" for of course they will not long continue to ruin each other for the benefit of the public; nor are there any means of compelling them to do so. Moreover, experience has shown that since the abandonment of competition between the London gas companies, the price of their gas has been materially reduced, to the great advantage of the consumer, as might reasonably have been expected from the greater economy in the distribution of gas resulting from it.

The public, however, have a horror of the name of "monopoly," and therefore, as soon as the companies had resolved to divide London into districts between them, the consumers raised a great outcry, on the plea that hereafter the price of gas might be increased, and that being at the mercy of only one company, the public would have no means of redress.

This agitation led to long inquiries before Parliamentary Committees in 1858, 1859, and 1860, and eventually to the passing of the Metropolis Gas Act of 1860, which distinctly recognised the wisdom of the course pursued by the companies, and the expediency of allowing only one company in each district of the metropolis, but at the same time it placed all the companies under most severe obligations and restrictions for the benefit of the public, both as to price, illuminating power, purity of their gas, the maximum rate of their dividend, and other matters, *as the condition of their enjoyment of a monopoly.*

The obligations imposed on the companies by the Act of 1860 were shortly as follows, viz.:—

The companies were bound under penalties to furnish an ample supply at all times to every one in the district requiring it, and practically to extend their mains whenever required in that district, either for the public or private supply.

They were restricted to the maximum price of 4*s.* 6*d.* per 1,000 cubic feet for 12-candle gas, except any extraordinary emergency should arise, when the Secretary of State for the Home Department had power to authorise an increase of price to the extent of not exceeding 5*s.* 6*d.* per 1,000.

They were subject to heavy penalties if their gas was at any time below the standards of illuminating power and purity fixed by the Act.

They were obliged to supply meters at fixed rentals.

They were to publish their accounts annually, with such details as the Home Secretary might require, so as to show distinctly the amount of profit they were making.

Their dividends were limited absolutely to 10 per cent. per annum. All surplus profits beyond the amount sufficient to pay dividends at that rate, and to form a reserve fund of a limited amount wherewith to maintain that rate of dividend, were to be applied in the reduction of the price for gas.

Quarter sessions, at the instance of any two consumers, had the power to order an investigation of any company's accounts at any time, and arbitrarily to reduce the price to be charged for gas if on such investigation it should appear that the companies' profits would admit of such reduction.

Such were the advantages conferred on the public by the Metropolis Gas Act of 1860, and such were the onerous obligations imposed on the companies as the price of the recognition of Parliament of the system of "districting" adopted by them.

The steady increase in the demand for gas, and the obligation put on the companies to supply every one who might require it, compelled the companies to expend additional capital year by year in enlarging their manufactories and extending their mains, in order that they might be able to fulfil their obligations, and ere long, as the power granted to them of raising the necessary capital became exhausted, they had to apply to Parliament for additional powers. At such times they were strenuously opposed by the local authorities, that is, either the Corporation of London within the city, or the Metropolitan Board of Works outside the city, who pleaded that advantage should be taken of the opportunity afforded by the exigency of any company to extract some further conditions from it in favour of the public. This agitation reached a climax in 1866, when the local authorities pleaded that the Act of 1860 was more favourable towards the companies than was intended, and Parliament appointed a Special Committee to inquire into the question. This inquiry was followed by another Committee in 1867, presided over by the present Lord Cardwell, who, yielding to the views of the Opposition, recommended Parliament to empower the local authorities to erect works and supply gas in competition with the companies out of the public revenue, unless the companies would consent to accept his terms, which terms altered entirely the title and conditions upon the faith of which the shareholders had invested their money, and which title Lord Cardwell admitted, in the report his Committee made to the House, that Parliament could not justly deprive the companies of without their consent. The terms referred to were that an arbitrary initial price should be fixed for gas, viz., 3*s.* 9*d.* per 1,000 cubic feet, with an illuminating power of sixteen candles, and that if any company could pay 10 per cent. at that price in any year, they might do so; if they could not, they might in the following year call upon Government to appoint three commissioners to make inquiry. These commissioners were authorised to raise the price for one year, to an amount not exceeding 5*s.* 6*d.* per 1,000 feet, if they should think it right, so as to allow the company in that year to pay as near as may be, but not exceeding, 10 per cent. No year was to be supplemented by the excess of profits in any other, and the system of the reserve fund was altogether abolished. In like manner the local authorities were empowered to call in the aid of the commissioners for an inquiry, with a view to a reduction of price below 3*s.* 9*d.* per 1,000, in case they should consider that a less price than 3*s.* 9*d.* ought to pay 10 per cent. These powers were termed the "revision clauses." All the companies on this occasion refused the terms proposed.

Accordingly, in the next year, the Corporation promoted a Bill, following out Lord Cardwell's suggestion, for power to erect works and supply gas in the city in competition with the companies, at the expense of the public rates, and in 1868 the same Committee, again under the presidency of Lord Cardwell, having repeated their threat that they would pass the Corporation Bill unless the terms referred to were accepted, the three companies supplying the city, who would most certainly have been utterly ruined by such unequal competition with the Corporation, were most reluctantly compelled to accept Lord Cardwell's conditions, which were accordingly incorporated into "the City of London Gas Act, 1868," and the three companies were amalgamated into one. The other companies, who were serving districts outside the city, and were not affected by the threat of competition by the local authorities, absolutely refused Lord Cardwell's terms, and Parliament happily modified those conditions in some important respects in the case of the Imperial Company in the next session (1869), when that company repeated their application for the means wherewith to comply with the obligations imposed upon them.

In the years 1872, 1873, and part of 1874, the coal famine occurred, when the cost of the material from which gas is produced rose from an average of 14*s.* to 32*s.* per ton, consequently the majority of the companies who remained under the Act of 1860, raised their prices of themselves, as they had the power to do, to enable them to meet the emergency; but the two larger companies, viz., the Chartered and the Imperial, who had no power to raise their prices of themselves, were obliged to submit their circumstances to the arbitration of Commissioners, under the revision clauses of the Acts of 1868 and 1869. The result of those appeals were wholly in favour of the companies, although the local authorities offered the most strenuous opposition to any increase of price above 3*s.* 9*d.* The Commissioners gave both companies authority to charge such an advance as they estimated would be sufficient to yield the maximum rate of dividend during the years of pressure, and no subsequent appeal having been necessary after 1874, the initial price of 3*s.* 9*d.* was resumed on the 1st January, 1875.

This result of the operation of the revision clauses, which originated with and were framed by the local authorities themselves, seems to have exasperated those bodies excessively. They insisted that the powers of revision were never intended to be the means of raising the price for gas, but only of reducing it; finding, however, that no one agreed with them in this view of the question, they resolved to endeavour to get the revision clauses repealed, and to devise some new scheme for the subjugation of the gas companies.

Accordingly they lost no time in making another appeal to Parliament, and in the session of 1874-75 the Corporation of

London and the Metropolitan Board of Works unitedly promoted three Bills, the character of which it is difficult to name respectfully, viz.:—

No. 1. A Bill to enable those bodies to establish new gas manufactories, and to lay down duplicate mains all over London, involving a probable outlay of 10 millions sterling, so that they might manufacture and sell gas in competition with the existing companies over whom those bodies had the control, whilst they themselves were not to be subject to any control, or to any of the restrictions or obligations imposed on the companies.

No. 2. A Bill to enable those bodies to purchase the undertakings of the gas companies compulsorily, at prices fixed by the purchasers themselves.

No. 3. A Bill entitled a "Metropolis Gas Regulations Bill."

The real object of this last Bill was to repeal the revision clauses of the Acts of 1868-69 before referred to, and in their place to enact that the price of 3*s.* 9*d.* per 1,000 cubic feet should be the maximum price which any of the companies might hereafter charge without suffering the penalty of a reduction in the prescribed rate of their dividends, which it was proposed should be decreased by a quarter per cent. (be the maximum or prescribed rate 10, 7, or 5 per cent.) for every penny the companies might charge above 3*s.* 9*d.* per 1,000. Or in other words, the companies being compelled to supply gas were to be made to suffer in their dividends for any rise in the cost of coal or in the rate of wages, over which they could exercise no possible control—there was no provision in the Bill for any increase of dividend in case the price of gas was reduced. No. 1 Bill was to be used as *brutum fulmen* to compel the companies to surrender and to accept the unreasonable conditions of Bill No. 3; and No. 2 (the Purchase Bill) was to be kept in reserve so as to enable the public bodies to pick up the undertakings of the companies after they had been so depreciated by the operations of the Regulations Bill (No. 3) as to be a burden and a loss to the shareholders.

Such were the designs of our renowned Corporation of the City of London, aided by their brethren the Metropolitan Board of Works, but those designs were happily too transparent to be successful. The present Government gave the promoters no encouragement, so that they were fain to withdraw Bills Nos. 1 and 2, and as to Bill No. 3, the Chancellor of the Exchequer (Sir Stafford Northcote) said openly in the House on the second reading of that Bill, that the clause which proposed to reduce the dividends, if the price for gas exceeded 3*s.* 9*d.*, "amounted to a "breach of faith, and was an unfair clause to be adopted. If that "clause were to be considered an essential principle of the Bill, the "House, he thought, would pause before it gave its consent."

Again, "It would be the duty of the Government to watch the "Bill carefully when it came back from committee, and if that "clause came back in its present shape, it would be impossible to "allow the Bill to proceed any further."

With this warning on the part of the Government, the Bill was sent to a select committee, of whom Mr. W. E. Forster was the chairman. Whilst the Bill was under consideration, the Board of Trade adopted the very unusual course of addressing a letter to the Committee, suggesting that, in the opinion of the Board, the justice of the case would be met by allowing the dividends of the companies to rise, as well as fall, above or below the prescribed rates, inversely with any increase or decrease in the price of gas, 3*s.* 9*d.* per 1,000 being adopted as the initial price for gas equal to sixteen candles of illuminating power; and this suggestion the Committee adopted, by resolving to recommend the repeal of the revision clauses of 1868 and 1869, on the faith of which the companies had raised and invested more than two millions of capital, and to substitute in their stead the entirely novel legislation of making the companies suffer or gain in their dividends by the rise or fall in their price for gas, notwithstanding that the companies have no power whatever to control the price of the raw material from which such gas is to be made, and which they are compelled to supply, whatever loss they may thereby incur.

When this decision was announced, the companies, with one exception, withdrew from the Committee, with a view to an appeal to the House itself, but owing to the lateness in the session when the Committee reported the Bill, it did not reach the stage of being read a third time, and so dropped. But the Bill as passed by the Committee in the form here described, has been again brought in by the promoters in the present session; the shareholders of the metropolitan gas companies, however, are still disinclined to believe that the legislature will inflict upon them so grievous an injury, or exhibit so manifest a departure from good faith or sound policy towards private enterprise, as to force the Bill in question upon them.

It is true that at the present price of coal the companies can pay their maximum rates of dividend at the price of 3*s.* 9*d.* per 1,000 feet for 16-candle gas; and it may even be admitted that a reduction of price, which will enable the companies under the scheme to pay higher dividends than heretofore, is probable, under existing circumstances, but who can ensure that the present cost of coal will continue for another year? Or who will be bold enough to say that, if after the companies have once surrendered their parliamentary title, and having accepted the sliding scale scheme, are able, by a reduction in the price for gas, to pay more than their existing maximum dividend, their adversaries will not immediately cry out that "the initial figure of 3*s.* 9*d.* is too high?" and, repeating their old tactics, plead that it is more favourable than was intended, and agitate for its reduction. There is, therefore, no finality in the proposed settlement, for experience has proved that when the companies seem to be prosperous a clamour is sure to arise, and according to the views of our local authorities, that state of prosperity would afford a sufficient reason for abridging the powers by which it had been occasioned.

The shareholders of the several companies by no means covet the supposed boon which is held out to them, of liberty to pay higher dividends than those already prescribed. The new scheme they say would obviously change entirely the character of their investment from a guaranteed stock, which it really is at present, into a speculative enterprise, wholly dependent upon the rise and fall in the cost of coal; they, therefore, decline the offer, which they consider to be wrong in principle.*

It is of course impossible in a paper of so limited dimensions to give more than the principal features, or a brief outline of the long series of conflicts which have taken place between the local authorities of the metropolis and the gas companies, and the part the legislature has taken in those proceedings; but sufficient, it is hoped, has been said, to convey clearly the main questions at issue, and the views of each of the parties concerned.

In seeking to find some justification for the attitude which the local authorities assume towards the companies, it must be admitted that the companies are certainly by no means popular bodies. One is accustomed to hear them spoken of everywhere, and by almost everyone, in the most opprobrious terms. They are accused among other things of being overbearing towards their customers—exacting in their charges—supplying abominably bad gas—of being able in some way, how, no one else knows, to make meters register a much larger quantity of gas than can possibly have been consumed—of lighting the public streets most indifferently—of always disturbing the roadways in the streets unnecessarily, and never properly repairing them after disturbance—and of making fabulous profits out of the much injured consumer, which profits it is asserted are either distributed among the shareholders, in some occult way, far in excess of their authorised dividends, or are spent recklessly in paying princely salaries to the directors and officials.

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* Since this paper was written the three companies lately amalgamated, viz., the Gaslight, the Imperial, and the Independent, who unitedly supply more than two-thirds of the metropolitan area north of the Thames, have consented to a compromise, by accepting the sliding scale scheme and relinquishing the revision clauses; also agreeing that when any additional share capital is raised it shall not be allotted among the shareholders at par, as usual, but shall be put up to auction, and sold to the highest bidder for the benefit of the undertaking.

This selection from the catalogue of crimes attributed to the metropolitan gas companies are matters of almost general faith—but a few facts and words of explanation ought to satisfy any reasonable person that there is no foundation whatever for any one of these accusations.

The alleged overbearing conduct is probably due in some measure to the necessity which exists for the companies to ask their consumers to pay their accounts with some degree of punctuality. But the London companies in order to spare their customers as much trouble as possible, collect their accounts not monthly, as they do in many of the towns in the provinces, in all the continental cities, as well as in all the cities in the United States, but quarterly. No part of the duty connected with the management of a gas company is so trying as this collection of debts. In London the accounts of those residing in private dwellings, even in the wealthier districts, average only 11*l.* a-year, or 1*l.* 15*s.* in autumn quarter, and 3*l.* 15*s.* in winter, and as the companies have to pay for all the coals they consume, as well as the wages of the large number of men they employ, week by week, it is essential to economy and good management that the monies due to the companies should be collected as promptly as circumstances will admit. Experience has proved also that long credit results in bad debts; and, as a proof of the forbearance of London companies, it may be stated that their losses from bad debts amount to about 14,000*l.* a-year, or nearly one-half per cent. on the total amount of their receipts arising from the sale of gas. In the other cities referred to where the collection is made every month, and where no such forbearance is shown as in London, a bad debt is unknown.

As to the alleged high price charged in London, the inhabitant who makes such a complaint can be scarcely aware that in no city in the world outside of England is the supply of gas so good as to quality, or so cheap as to price.

In London, the normal price is at the rate of 3*s.* 9*d.* per 1,000 cubic feet for gas equal to sixteen sperm candles in illuminating power. In the undermentioned cities, where the quality is much inferior, the price is as follows, viz. :—

	s.	*d.*	
Paris	6	7¾	per 1,000
Berlin	4	3⅓	,,
Amsterdam	5	–	,,
Vienna	5	8½	,,
New York	10	–	,,
The other cities in the United States	12	–	,,

In some of the northern cities of England and Scotland, which are situated close to the coal fields, and where the cost of labour, land, and material, is much less than in London, those cities may have gas cheaper and of a higher illuminating power than London; but in order to institute a fair comparison between them, the circumstances under which the same is supplied in each should be duly weighed and considered.

The standard of illuminating power for the gas supplied in London has been fixed at sixteen candles, for the reason that no higher illuminating power can be produced without the use of a very large quantity of rich "cannel" coal. Even 16-candle quality requires the admixture of nearly 10 per cent. of that coal with about 90 per cent. of certain descriptions of Durham coal. Good cannel is becoming very scarce, and therefore costly, and the coke which is produced from it is of very inferior quality. The price of cannel has gone up nearly 50 per cent. within the last few years; the owners of it are very few in number; and it is obvious that if the illuminating power in London were raised so as to compel the companies to employ that description of coal exclusively, or even in much larger quantities than at present, they would be placed at the mercy of the cannel coal owners, and it would be utterly impossible to supply gas in London at anything like the present prices.

It has been stated, in an earlier part of this paper, that the quantity of coal now consumed by the London companies amounts to 1,500,000 tons per annum, and it will be seen by reference to Table IV, at the end of this paper, that the total yield of cannel of all kinds amounts to no more than 1,418,176 tons per annum, a large portion of which is quite unfit for the purpose of gas manufacture.

The maximum quantity of sulphur and ammonia allowed to be present in gas in London (no trace of sulphuretted hydrogen is permitted) is fixed from time to time, according to circumstances, by three scientific gentlemen, selected and appointed for the purpose by the Board of Trade, who are called gas referees, and in proof of the high position and qualification of those referees for the office they hold, it may be sufficient to mention that Professor Tyndall is one of them. The duty of ascertaining whether the companies comply with the requirements of the Acts and of the referees, both as to illuminating power and purity, is vested in the Corporation of London within the city and the Metropolitan Board of Works outside the city, and both of these bodies employ skilled chemists of a high class to test the gas continuously day by day, whilst it is being delivered out for consumption, in testing houses in various places about London, which the companies are bound to provide and fit up at their expense with all necessary apparatus and appliances, and to give the requisite supply of gas for the purpose free of cost. The penalties to which the companies are liable for any infringement of the standards, however limited may be the degree of excess, for any period of the day, are very severe, and it is further enacted, by way of additional torture, that every penalty which may be incurred shall not be payable out of the ordinary expenses of the company, but shall be absolutely deducted from the dividends of the shareholders. The public bodies referred to, whose disposition towards the gas companies cannot be characterised as amicable, are watchful beyond the possibility of evading them, even if it were desired, and they would apparently be only too happy if they could catch the companies tripping; but in spite of their inclinations, they are compelled day by day to admit and certify, as they do, that the gas supplied is invariably not only equal to but above the standard as respects its illuminating power, and several degrees below the maxima fixed for the impurities.

As to the disturbance of the roadways in the streets, the most convenient and appropriate place in which the gas mains might be laid is undoubtedly underneath the pavement of the side walks, as in most foreign cities, but in London the cellars of the houses extend underneath the whole of the side pavements, the arches of which are so near the surface as not to admit of the pipes being laid between them and the pavement; and after any roadways may have been disturbed for the necessary main laying, the local vestries refuse to allow the companies to make good the surface; they claim to do this work themselves, with a view, apparently, of making some profit out of the companies by so doing. The vestries, and not the companies, are therefore answerable for any defects in the restoration of the roadways, if such there be, after main laying. The vestries are also responsible for all the odium which attaches to any defective lighting of the public thoroughfares; the companies merely provide and supply the gas, whilst the vestries determine the number and position of the lamps, as well as the size of the burner which regulates the quantity of gas to be supplied, and for which they are to pay; so that, if through the parsimony of the local authorities the street lamps are not sufficiently numerous, or the size of the gas flame is not so large as it ought to be, the companies are in no way to blame; they are, in fact, powerless to make it otherwise. Comparing London and Paris in this respect, it may be sufficient to state that in the former, the area of which is 77,997 acres, there are 54,119 public lamps, whilst in the latter there are 38,498 in an area of 19,299 acres.

A very slight acquaintance with the mechanical contrivance of a gas meter ought to satisfy any impartial mind that by no human ingenuity can it be wilfully driven onward, so as to oblige the consumer to take more gas than he desires, or to register more than he actually burns. If a meter errs at all—and every machine is to a certain extent imperfect—the liability so to err is in favour of the consumer. But the legislature has not been unmindful of those who feel dissatisfied, and feel also disqualified to look into this matter for themselves; official inspectors of meters and official meter-testing offices are provided in several convenient places in the metropolis, where impartial and skilled evidence may be speedily obtained at a trifling expense.

With respect to the dividends and expenditure of the companies, it is evidently not generally known that the companies who supply the larger part of the metropolis are placed under the active inspection of an official auditor, who is appointed by the Board of Trade for the express purpose of examining their accounts and of finding out whether any irregularity occurs. This auditor is a very different person from the ordinary and often incompetent shareholders' auditor, who readily accepts specious explanations and is willing to make things pleasant. The Government official takes nothing for granted; he likes his power, and uses it; he holds a continuous examination and makes minute inquiry; he is armed with supreme authority to disallow any item he may consider improper either in principle or detail, and he is actually authorised to prevent the declaration of any dividend which he considers has not been duly earned or is not lawfully payable. It is difficult, therefore, to conceive how more stringent precautions could be devised, or a state of things under which it would be more impossible for the companies to delude the public, even if they desired to do so, than under the existing law; and it may be added that the companies referred to, confident in their own integrity, willingly consented to submit themselves to these safeguards and precautions in favour of the consumer, in the hope that thereby they might disarm suspicion and gain confidence.

The increase in the consumption of gas throughout London is fairly illustrated by Table V appended, relating to the extensive district of the Imperial Company, over a period of twenty-five years ending 1874, during which the annual consumption has increased fourfold, and the quantity consumed on the day of the greatest demand in each year, which is always on the day preceding Christmas-day, has increased at a still larger ratio, being more than fivefold. It is for this day of the greatest demand, which in the case of the Imperial exceeds any other day by about two millions of cubic feet, that the capabilities of the several companies' works must be prepared and maintained, and this of necessity involves the outlay of a very large amount of capital for works which are required for the service of this limited season of the year only.

The increase of consumption it will be seen is still steadily going on, although the rate has fallen off somewhat during the last five years; there are, however, a very large number of houses yet to be supplied, especially those of the working classes.

That class, indeed, in London do not as a rule avail themselves of the use of gas in their dwellings, and by no means to the extent they do in the northern towns of England or in Scotland. For example, in the well-to-do parishes of Marylebone and Paddington, in London, the number of inhabited houses supplied with gas are 73 and 80 per cent. respectively of the whole number, whilst in Bethnal Green 27 per cent. only of the dwellings are thus supplied, and in the northern towns of England, as well as in Scotland, the number of one-light meters, which is essentially the poor man's meter, greatly exceed those used in London. Very few of the small dwellings in London indeed have any gas fittings in them, the poor for the most part still use the common dip candle, or a paraffin lamp, when some manufacture is carried on which requires an extra amount of light; and yet it will be seen from a very interesting Table (VI) appended to this paper that, adopting the common standard of a sperm candle for comparison, the quality of gas now sold in London at 3*s.* 9*d.* per 1,000 cubic feet, will give 52 hours of light for 1*d.*, whilst a dip candle at 6*d.* per pound will give only 5 hours and 45 minutes of the same light for that money.

The working classes of London, therefore, require to be educated in this particular among other things relating to the economy of living, and it is satisfactory to notice that in the new dwellings for artisans, and in some of the model lodging houses lately erected, the promoters of those excellent institutions are doing their best to this end by fitting the several rooms with the needful appliances, so that the occupiers may avail themselves of the cheapest mode of obtaining artificial light.

It only remains to refer to a question which has been the subject of much discussion of late, viz., whether it is desirable or not that the supply of gas should be taken from the companies and placed in the hands of the municipal authorities. The fact that the supply is of necessity a monopoly, that economy may be effected by uniting the districts of the companies into one, and that the roads, which are occupied by the mains and pipes of the companies, are under municipal control, would seem to commend the proposal; and probably if London had been under the government of a municipal council worthy of the name, representative in its character, and possessing the confidence of the community, the gas supply would long since have been entrusted to that body. There are many precedents for so doing—several of the large towns in England, and Manchester especially, may be referred to, where the duty has been most efficiently performed by the municipalities for many years; and there is no reason why a competent committee of a municipal council in the metropolis could not conduct the operations now fulfilled by the directors of the several companies with equal skill, although, if proof is needed that the task is not beyond their powers, certainly no such enormous undertaking, as that involved in the manufacture and distribution of gas for the whole of London, is to be found elsewhere.

The companies can have no desire to retain the work in their hands, if the municipality desires to acquire their undertakings, provided only that their property is fairly purchased, and the transfer is effected on equitable terms. The shareholders in those companies are, however, greatly alarmed, and naturally apprehensive, at the views which the authorities have expressed as to what they consider to be equitable terms for a compulsory sale. In a letter from the late chairman of the Metropolitan Board of Works to Sir Stafford Northcote, as President of the Board of Trade in 1866, when the former was requested to communicate to the Government the opinion of the Metropolitan Board as to the terms upon which authority should be given to that Board to purchase the property of the companies, he deliberately states "that looking at the *present* market value of the gas shares, and "to the fact that their (the companies') security is an uncertain "one, the Board resolve that it would be *fair* and *proper* that the "Bill for the purpose of purchase should provide for the enforced "sale of the properties of the companies by the payment to the "shareholders of a dividend of *only* 6 *per cent.*" Now the properties referred to, it should be borne in mind, were then earning and paying authorised dividends at the rate of 10 per cent., and they had been doing so with regularity for many years previously; and in an earlier part of the same letter the chairman of the Metropolitan Board gives it as the reason for requiring an alteration of the then existing law, that the operation of that law "practically secured to "the companies a guaranteed dividend of 10 per cent."

Again, as lately as last year, the Bill promoted by the Metropolitan Board for power to purchase compulsorily the undertakings of the companies, proposed that the price to be given for the same should be the average market value of the shares of the companies during the three previous years, throughout the whole of which period it was notorious that the violent agitation which had been raging against the companies had had the effect of depreciating the value of their shares from 30 to 40 per cent. The case of the Imperial Company may be stated as fairly illustrating the mode in which the shareholders in all the companies would have been dealt with under this proposal. The average price of the Imperial

Company's stock during the three years selected for the average was little more than 166*l.*, but the price at which the same stock was freely selling in the market shortly before the Bill was brought into the House was about 182*l.*, and since the agitation has abated the price has risen to upwards of 200*l.*

These are the only occasions on which the Metropolitan Board have openly and officially stated what they consider to be equitable terms for a compulsory purchase of the undertakings of the London gas companies, terms which, it is scarcely needful to say, do not accord with the views of the shareholders, and which they fully believe the legislature will never compel them to accept, notwithstanding that the sacrifice of the property of the comparatively smaller number of shareholders for the benefit of the much larger body of consumers has met with, and, perhaps, will always meet with, a certain amount of support both in and out of Parliament.

APPENDIX.

TABLE I.—*Statement of the Share and Loan Capital of the Metropolitan Gas Companies on the* 31*st December*, 1875, *showing the Average Maximum Rate of Dividend each Company is allowed to Pay on the Share Capital then employed.*

Company.	Capital Employed.			Average Maximum Dividend per Cent. on Share Capital Employed.
	Share.	Loan.	Total.	
	£	£	£	
Gas Light	3,349,998	813,500	4,163,498	8·9
Imperial	2,854,182	498,000	3,352,182	8·4
Independent	255,000	—	255,000	8·9
Commercial	450,000	—	450,000	10·0
Ratcliff	100,000	15,670	115,670	10·0
London	751,602	137,642	889,244	8·0
Phœnix	855,000	175,000	1,060,000	8·6
South Metropolitan	430,000	—	430,000	10·0
Surrey Consumers'	229,995	60,000	289,995	10·0
Total	9,305,777	1,699,812	11,005,589	8·8

TABLE II.—*Metropolitan Gas Companies. Prices Charged by the several Companies for Gas at their Commencement.*

Name of Company.	Date of Establishment.	Date of Incorporation.	Prices Charged for Gas, per 1,000 Feet, at the Commencement.		
				s.	*d.*
Chartered	—	1810	In 1823 when meters were first used	15	–
City of London	—	'17	1821	15	–
Imperial	—	'21	'26	15	–
Ratcliff	—	'23	'29	12	6
Phœnix	—	'24	'24	15	–
Independent	1826	'29	'29	12	–
Equitable	—	'31	'31	12	–
South Metropolitan	1834	'42	'34	11	–
London	'33	'44	'34	9	–
Commercial	—	'47	'50	5	–
Great Central	—	'48	'48	4	–
Western	1850	—	'50	8 Cannel gas	–
Surrey Consumers'	—	1854	'54	4	

Note.—Gas was originally supplied at per burner. There were but few meters in use between 1821 and 1825; they did not come into general use till about 1830.

TABLE III.—*Showing the Rates of Dividend Paid by the earlier Metropolitan Gas Companies in the commencement of their Undertakings.*

Year.	Chartered Company, Incorporated in 1810.	Imperial Company, Incorporated in 1821.	Phœnix Company, Incorporated in 1824.	Independent Company, Incorporated in 1829.
	Per cnt.	Per cnt.	Per cnt.	Per cnt.
1811........	Nil	—	—	—
'12........	"	—	—	—
'13........	"	—	—	—
'14........	"	—	—	—
'15........	"	—	—	—
'16........	"	—	—	—
'17........	6	—	—	—
'18........	8	—	—	—
'19........	8	—	—	—
'20........	8	—	—	—
'21........	8	Nil	—	—
'22........	8	"	—	—
'23........	7½	"	—	—
'24........	7	2	Nil	—
'25........	6½	4	5	—
'26........	6	5	5	—
'27........	6	3¼	5½	—
'28........	6	Nil	6	—
'29........	6	5	6	—
'30........	6	5	6	5
'31........	6	5	6	6
'32........	6	5	6	6
'33........	6	5	6	6
'34........	6	5	4½	8
'35........	6	5	3	9
'36........	6	5	3	9
'37........	6	5	3	9
'38........	6	5	3½	9
'39........	6	5	4	9
'40........	6	5½	5	9

TABLE IV.—*Showing the Total Quantity of Cannel of all kinds Produced in* 1865 *by all the Collieries in the United Kingdom, as ascertained by Mr. Robert Hunt, F.R.S., Keeper of Mining Records in the Government School of Mines in Jermyn Street.*

	Tons.
England	946,175
Wales	150,000
Scotland	322,000
	1,418,176
Of which there were used for distillation for coal oil	250,000
	1,168,176

Note.—The above table, although referring to the year 1865, may be taken as fairly representing the yield of cannel of all kinds in the year 1875, with the exception, perhaps, of Scotland, where there may have been some increase.

The quantity of cannel used by the metropolitan gas companies in the year 1875, for the purpose of enriching the gas made from Durham coal, amounted to 84,310 tons.

Table V.—*Imperial Gas Company. Table Showing the Rate of Increase in the Demand for Gas from* 1850 *to* 1874 *inclusive, over the same Area of Supply.*

Year.	Total Quantity Delivered during the Year.	Increase per Cent.			Largest Quantity Delivered in One Day in the Year.
		One Year.	Five Years.	Ten Years.	
	Cubic feet.				Cubic feet.
1850	898,031,942	5·9	43·1	100·4	4,193,000
'51	984,631,416	9·6	41·9	112·0	4,866,000
'52	1,102,680,708	12·0	43·1	131·4	4,993,000
'53	1,236,861,400	12·2	52·1	149·6	6,178,000
'54	1,318,349,000	6·6	55·5	141·9	6,657,000
'55	1,460,391,000	10·8	62·6	132·7	7,531,000
'56	1,548,347,000	6·0	57·0	125·3	7,710,000
'57	1,608,306,000	3·9	45·8	108·7	7,800,000
'58	1,692,336,000	5·2	36·8	108·1	8,545,000
'59	1,808,960,000	6·9	37·2	113·4	9,811,000
1860	1,981,913,000	9·6	35·7	120·7	10,008,000
'61	2,038,887,000	2·9	31·7	112·3	9,662,000*
'62	2,153,909,000	5·6	33·9	95·3	11,203,000
'63	2,212,411,000	2·7	30·7	78·9	11,585,000
'64	2,463,989,000	11·3	36·2	86·8	13,087,000
'65	2,637,222,000	7·0	33·0	80·5	14,254,000
'66	2,838,701,000	7·1	39·2	83·4	15,724,000
'67	2,992,832,000	5·4	38·9	86·1	15,971,000
'68	3,019,000,000	0·9	36·5	78·5	17,023,000
'69	3,169,444,000	5·0	28·6	75·2	17,396,000
1870	3,364,524,000	6·2	27·6	69·7	19,603,000
'71	3,559,857,000	5·8	25·4	74·6	20,394,000
'72	3,661,583,000	2·9	22·3	70·0	19,953,000
'73	3,856,018,000	5·3	27·7	74·3	19,879,000
'74	3,998,059,000	3·7	26·1	62·3	23,352,000

* This falling off is attributed to the death of the Prince Consort, which occurred on the 16th December in this year.

Note.—5 per cent. at compound interest = 63 per cent. in ten years.
6 ,, = 79 ,,
7 ,, = 96 ,,

Table VI.—*Comparative Cost of Illumination by Different Lighting Materials in common use; showing the Hour of Duration for each Penny. The Light Reduced to Equal One Standard Sperm Candle.*

Description of Material.		Price in London.		Hours Light for One Penny.	
		s.	*d.*		
Standard sperm candle	per lb.	2	–	2^h	15^m
Best wax candle	„	2	–	2	15
Sperm oil in moderator	per gal.	9	6	2	24
Belmont sperm candle	per lb.	1	3	2	54
Stella or Burmese wax	„	1	3	3	15
Petroline candles	„	1	6	4	30
Composite candles, No. 1	„	–	11	4	10
„ 3	„	–	8	5	30
Common dip candles	„	–	6	5	45
Almond oil in moderator	per gal.	9	3	6	–
Colza „	„	5	–	9	15
Paraffin oil lamp	„	3	–	19	11
Common gas	per 1,000 ft.	3	9	52	–

Note.—The writer is indebted for the above table to Mr. George Glover, of the Ranelagh Works, Pimlico, the manufacturer of the celebrated dry meter, the experiments for which table were made under Mr. Glover's personal superintendence.

Discussion *on* Mr. Chubb's Paper.

Professor Leone Levi asked how much of the directors' fees, salaries of clerks, and other expenses of keeping up the offices would be economised if the Corporation were to purchase the whole interest of the companies. He imagined that a great deal of waste now occurred in consequence of the existence of so many companies, and that much expenditure might be saved were the whole provision of gas to the Metropolis entrusted to the Corporation or Board of Works. If he was well-informed, in Manchester the Corporation was producing gas at a cheaper rate than the London companies did, although Manchester was at some distance from the Newcastle coal-fields. The paper was defective in this respect that it did not give an opportunity of comparing one place with another or one method of dealing with another. The author assumed that the gas companies were to work at a guaranteed stock of 10 per cent. That of course was the maximum to begin with, but the paper did not give the dividend actually made by all the companies from year to year; in some cases it was 6 and in some cases 7 per cent. From 1830 the Chartered company divided only 6 per cent. If that were so, there was apparently nothing unjust in Sir John Thwaite's proposal to take 6 per cent. as a basis. The question resolved itself into a consumers' question—whether the consumers would be benefited by the Corporation or the Board of Works having the entire gas supply in their own hands, rather than it should be in the hands of companies making a monopoly. The paper was in his opinion written entirely from a monopolist's point of view. It was very useful as far as it went, but he was sorry to see that it did not contain such elements as would lead to a fruitful discussion.

Mr. Patterson thought with Professor Levi that the author should have added some further statistics to the paper. In regard to the Professor's requiring Mr. Chubb to supply some statistics showing the gain to be obtained by the public by the transference of the gas to the municipality, no gain such as the Professor looked forward to was to be expected in the case of two such companies as the Imperial and the Chartered, supplying two-thirds of all London. The difficulty was before sufficiently great of superintending each of these companies' works efficiently; and by putting the two together and reducing the number of directors he did not believe that they would be better managed than they had been separately. The only advantage he saw was that by shutting up badly situated companies' gas works in London there would be a great economy. Some works in London had been badly situated for the supply of coal, which was an essential element, and by taking them out to such places as Beckton and Kensal Green, where the supply of coal is more accessible, doubtless economy would be the result; but he did not look forward to any economy from the mere amalgamation of administration. If the Municipal bodies expected any gain in that direction he did not think their expectations would be realised.

Mr. Chubb, in answer to a question by Dr. Farr, stated he was quite right in assuming from Table No. III that there was no dividend earned by the Chartered Company from 1812 until 1817. The first dividend paid was in 1817, and that was 6 per cent., then it was 8 per cent. for a few years, and afterwards, as far as the table is carried, it became nearly a steady 6 per cent. (Dr. Farr: They paid a dividend every year?) Yes. In 1860 they paid 10 per cent., and since that the percentage has been the same. That might be complained of, but it was authorised, and the money was invested on the condition that such a price might be charged, as would with due care and management yield a dividend at the rate of 10 per cent. He had not the least objection to admit that the paper was written from the companies' point of view, nor had he any objection to state the total amount paid to the directors and auditors of all the companies, and in the salaries of the officers of the companies. If the companies were reduced to one undertaking, of course there need not be so many officials. The directors' salaries were 0·40 of a penny on every 1,000 feet of gas—the salaries of the whole staff of clerks and secretaries of the companies amounted to 0·45 of a penny. He had some difficulty when writing the paper in restraining himself from giving more particulars, but owing to the extent of the question he had been compelled to condense, yet he hoped that some suggestions would be given to him for future use. He had endeavoured to post himself up to the end of last year, but he had failed because the accounts of the companies were not all complete. Manchester had been alluded to as one of the places with which a comparison should be made. There was undoubtedly better gas there than in London and a less price was charged. Three shillings in the city and 3*s.* 6*d.* in the outlying districts. Manchester was situated on the borders of the Wigan coalfield, in which district the best cannel is obtained, and coal is procured at a much cheaper rate at Manchester than in London; but for many years Manchester charged a higher price for gas than was charged in London. When the London price was 4*s.* 6*d.*, Manchester was charging 6*s.*, and at that time they used all the surplus profits to pay off their capital. They reduced it year by year until they had now a very reduced amount of capital to pay interest upon. They also raised their capital at 4 per cent. interest, and by that means they had very little interest to charge upon capital investments. The actual working expenses of the Metropolitan companies, or at Manchester indeed, really differed very little except from local circumstances. Some of the Metropolitan companies had reduced their capital in earlier times in the same way as that to which he had alluded. The companies then spent their increased profit in enlarging their mains and in other works, instead of raising additional share capital for the purpose, and there was in such cases less capital to pay interest upon. The South Metropolitan, for instance, wanted only 11*d.* per thousand to pay their maximum dividend, whereas other companies who had not so reduced their capital wanted 1*s.* 3*d.* One other company only wanted 9*d.* per thousand; there were in fact special circumstances in almost every company which really required explanation, and which affected the price charged by the company for their gas. He was glad to give that explanation in order to show that it was not economy of working, but that there were other circumstances which affected the price charged for gas to a far greater degree.

In answer to a question, Mr. Chubb stated that the Metropolitan companies were practically guaranteed dividends of 10 per cent. The Act required the companies to supply gas of a certain quality to everyone who demanded it, and subjected them to penalties if they did not do so. It provided that they might charge such a price within limits, 5*s.* 6*d.* being the limit, to pay 10 per cent. on their capital, and not only so, but they would be allowed to put by a reserve fund year by year to the extent of 10 per cent. on the capital raised, which fund is stated to be for the purpose of equalising and insuring the payment of dividends at the maximum rate. This was complained of by the Metropolitan Board of Works; practically it amounted to a guaranteed dividend. Since he had written the paper, the two companies alluded to by Mr. Patterson and one of the smaller companies had been amalgamated. The United Company had adopted the scheme that the dividend of 10 per cent. should rise and fall with the price, although he still maintained that the scheme was wrong in principle. However, it had been accepted, and a large portion of the metropolis would now be supplied with gas upon that basis, namely, that if the price were reduced a penny per thousand feet the Company might pay one quarter per cent. higher dividend, and if, on the other hand, the price were raised a penny, there would be a quarter per cent. less dividend.

Mr. Hyde Clarke said that Mr. Chubb stated that he had been compelled by circumstances to compress a large fund of information in order to give a clear view on the present occasion. It would, therefore, be worth while to turn back to the early sketch which Mr. Chubb had given of the history of gas, and of the obstacles to be met with, because that had a wider bearing. One might be inclined to believe that gas was opposed in the first instance by men of science, but by careful perusal it would be found that there were other circumstances which influenced the delay of its introduction and progress. All charlatanism was put forward under the plea that gas and other useful inventions had been opposed by men of science. If Mr. Chubb would give the information with which he was so conversant, it would be found that a great part of the opposition that was made to the introduction of the gas companies was in consequence of the statements of Mr. Windsor, the projector. At the time Mr. Windsor issued his prospectus of what he called The National Light and Heat Company, he proposed to abolish every vested interest. He was to prevent anybody from burning a candle, and compel him to be supplied with gas from Mr. Windsor's National Light and Heat Company; and the whole cooking of every cottager in the country was to be performed by gas. Each 100*l.* share was to pay several hundreds a-year. Men less ardent than Mr. Windsor were less disposed to accept that prospectus. Mr. Chubb himself had given a corrective in the picture he had drawn of the mechanical expedients that were then available. It would be remembered that on account of the difficulties in the manufacture of iron pipes and tubing, the water-mains of London at that time—those of the New River Company for instance—were made out of trunks of trees bored through and inserted in each other, and in the same way as Mr. Chubb had pointed out old gun-barrels were largely used up for gas fittings. Besides, there was a serious explosion of a gasometer in London. There was an impossibility at that time of working out the scheme of such a projector as Mr. Windsor, and while Sir Humphrey Davy and other men of science could not deny what they were carrying out in their own laboratories, namely, the practicability of illuminating with gas, they hesitated at that stage to carry out the scheme of Mr. Windsor and others, and that is what should be borne in mind and due allowance made for. Besides that, there were a number of vested interests at that period. The streets were lighted with train oil, and there was the competition of the Greenland fisheries that exercised a considerable influence to be contended with. There was also a great question at that time as to whether coal itself was the best material for making gas. Oil gas had been tried in London and Dublin, and on account of the great expense of the fittings there was an experiment made that instead of supplying it by means of the inconvenient and expensive fittings and mains, it should be supplied like milk or beer to the houses or shops of the people. That was actually done for some considerable period by the Portable Gas Company. A cylinder was taken into the shop, and gas was conveyed from the cylinder to the counter of the shop by a small pipe from the top. At that period this was a feasible undertaking, however absurd it might seem now. Through an improvement in the fittings, the diminution in the price of coal, and the improvements in the manufacture of gas, the price of coal-gas was reduced, and there was an end for the time of portable or compressed gas, but now at length it was in use for railway carriages. His remarks were rather intended as a supplement to what Mr. Chubb had said, because people were apt sometimes to be misled as to the actual events that had influenced the career of such undertakings. Mr. Chubb had spoken of the price of gas, but at the time he was speaking of, the price of gas was 28*s.*, and afterwards it was subjected to the enormous reduction to 21*s.*, as it was considered. Economical considerations had a greater influence in the development of an invention than the simple beauty of the invention in the first instance.

Mr. George Livesey, referring to Mr. Chubb's statement that the South Metropolitan charged a higher price in years gone by than others in order to reduce their capital, said that that company had never charged a higher price than their neighbours. Previous to 1848 there was a competition all over London, and all the companies were obliged to charge the same price. In 1848 the price was 6*s*. per thousand. Sir John Thwaites (then Mr. Thwaites) undertook an agitation to reduce this from 6*s*. to 4*s*., and the gas companies then, as they had at other times, showed themselves a pig-headed lot, and refused to make any reduction whatever. The result of this was that the Great Central Company was started in the north of London, and the Surrey Consumers' in the south, and there was a reduction to 4*s*. The competition went on for some years, but in 1853 it was found that this competition would not do, and the companies resolved to divide their districts. This suggestion came from Mr. Thwaites. At Michaelmas, 1853, the London and Phœnix, the Surrey Consumers', and the South Metropolitan divided the South of London between them. The reduction from 6*s*. to 4*s*. reduced the dividends of the South Metropolitan from 6 to 5 per cent. for two or three years, and immediately on the districting taking place the price went to 4*s*. 6*d*., and the dividends began to rise. Looking at that fact, it could not be said that the price of gas had been reduced so much during the last twenty-five years. The gas itself after all was not so much better, but the improvement in it was due to a great extent to the alteration of the burners. He could not see the justice of companies being guaranteed 10 per cent. He did not agree with Mr. Chubb that they were absolutely guaranteed 10 per cent., but they were practically guaranteed this amount. The fact of their having a monopoly of the district to themselves, and of their having a price to cover all contingencies, gave them the power to secure to themselves 10 per cent. He hardly thought that it was the intention of the legislature to give an absolute guarantee of 10 per cent., for it said in the Act that the dividend should not exceed 10 per cent., as was the case with railway companies. As to the sliding scale, he contended that it was not fair in such a crisis as the gas companies had passed through lately, when coal went up enormously in price, that the whole extra charge should be laid on the consumers. No ordinary tradesman was able to do it. The railway companies raised their fares, and they also reduced their dividends to some extent. But the gas companies did not diminish their profits; they made the same dividend in the year of famine as in the year of plenty. The Newcastle Company and the Brighton Company were limited to 3*s*. 6*d*. per thousand previous to the coal famine, but when it came upon them this was found to be a very hard price, and they applied to Parliament to increase their price. Lord Redesdale passed a resolution that any company applying for an increase of its maximum price should not pay more than 5 per cent. so long as it charged a higher rate than the maximum price fixed under the Act. The Newcastle and the Brighton Companies got power to charge a higher price, and they went up to 4*s*. for one year, and then they reduced it to 3*s*. 6*d*. They were not willing to suffer such a reduction of dividend, and that brought their price down. He thought that to cut down the dividend from 10 per cent. to 5 per cent. was a hard matter indeed; but he thought the sliding scale principle was a most fair one. The only objection made to it was that if it were adopted and the companies were paying 11 and 12 per cent. the public would make an outcry. He believed if the sliding scale were adopted it would be to the interest of the companies to increase their business very largely. He (Mr. Livesey) had read the reports of the Manchester Corporation every year, and they gave an account of the number of meters fixed. The number last year was over 60,000, but upwards of 30,000 were for two lights, thus showing that half their customers were of the working class. It had not been to the interest of the London companies to supply the working classes, but if they increased their business by every means in their power, they could increase the number of consumers by at least 20 per cent. In that case he should not mind having 1 per cent. bad debts, instead of half per cent. As to the auditing, he was bound to agree with all that Mr. Chubb had said about the Government auditor, but no auditor could go to the works and see what should be appropriated to revenue and what to capital It would be to the companies' interest to keep down their capital and supply their customers well. Of the capital of the South Metropolitan Company there was nearly 80,000*l.* wasted or lost originally. From 1840 up to 1850 that company paid a dividend averaging 6 per cent., and used their surplus profits in recouping the loss of their capital. He maintained that the capital of the South Metropolitan Company was as much as it ought to be; and to say that it had been made by charging the consumers a higher price was not in accordance with the fact. In reference to the advantages to be obtained by the municipal authorities having the gas supply in their own hands, they could not perhaps improve on the management, but one of the greatest advantages would be that they would raise all future capital on something not exceeding 4 per cent. In reference to the question of closing the old works alluded to by Mr. Patterson, if some of those works were placed more conveniently for coal they would be more advantageous than the new ones, owing to the good market for coke.

Dr. FARR thought the paper was of great interest and full of information, and as a compromise had been made between the Metropolitan and the great gas companies, and these had come to terms with the Board of Trade, he hoped that Mr. Chubb would give as full information as he could in relation to the London gas companies. Ten per cent. was no doubt high, but not too high if the capital had been raised from the first and exposed to all the risk that had been referred to. In the early part of his paper Mr. Chubb said that a great addition was made to capital in 1830 and in 1840; certain capital was exposed to no risk at all. All the railway companies and other companies that raised money now raised it on guaranteed dividends, and had no difficulty in getting capital at 4 or 5 per cent. Taking the water and gas companies together, their capital was about 20,000,000*l.*, on which there was a profit, taking everything into account, of 1,600,000*l.* If the *Metropolitan* Board could raise capital in the same way there would be 800,000*l.* to spare. That 800,000*l.* was really a tax on the consumers in London now. It was very questionable, looking at it from his point of view, whether the House of Commons should have the power of permitting companies like these to tax London to such a large extent as 800,000*l.* a-year. He himself was strongly disposed to think that it would have been a better bargain if the *Metropolitan* Board had taken the supply of gas and water into its own hands, and if there had been a proper municipal organisation. If anything is done, the most perfect justice should be displayed towards the companies and their officials. The Society would feel obliged to Mr. Chubb if he will inform them the amount of capital engaged in the companies since 1840, and also, as far as he can, the dividends that had been obtained from them up to the present time.

Rev. Mr. Doxsey asked Mr. Chubb if he would append to his paper a list of the prices charged by the different companies, and his opinion as to their reasons for such charges. During the time of the coal famine, the South Metropolitan, who, he thought, dealt liberally with its customers, were charging only 3*s.* per thousand, while he was under the impression that some of the other companies were charging 4*s.* and 4*s.* 6*d.*, and in some parts of London 5*s.* He was in hopes that the discussion would have turned in the direction of the consumers' point of view. He thought that the chief advantage which would, *primâ facie*, result from the management of the gas works by the Metropolitan Board, would be the bringing of the interests both of the consumers and the companies into accord, inasmuch as there would be no advantage in charging more than the mere cost of the coal and the expenses. If Mr. Chubb would kindly consider this in completing his paper, he would add much to the obligation the Society was under to him for supplying his valuable paper.

Mr. Tom Abercrombie Hedley said he had for twenty or thirty years advocated the adoption of the sliding scale. Some companies were managed better than others, and he considered the great blot on the present system of legislation was that it gave all the companies, whether badly or well conducted, the one maximum dividend. The London companies had, he asserted, only been liberal, as they had been compelled to be liberal. The one cry of the companies had been, "The price of gas cannot be reduced," but as soon as one company reduced the price every other company followed. By the adoption of the sliding scale the public would, he believed, soon see a very considerable reduction in the price of gas. In the case of the London Gaslight Company, he knew that the first two or three issues of their capital were entirely wasted, and the consumers in that part of London supplied by that company were now paying 10 per cent. interest on works now of no use to them. The 50*l.* shares of that company, which now were selling at 87*l.*, were to be bought thirty years ago at 2*l.* per share; and on those 2*l.* shares people were now getting their 10 per cent. As to the illuminating power of the gas, it was worse now than it was twenty years ago. The burner by which they used to test the gas formerly showed that it was equal to 12 candles, but, by an improvement in the burner, gas now called 15-candle gas was, ten years ago, called 12-candle gas.

Instead of the illuminating power of the gas in London having improved, a certain improvement had been effected in the burner by which its quality was determined.

Mr. A. H. Smee asked if it was not a fact that the hands of the committee who assembled to fix the price of gas were not practically tied, on account of the Government imposing a statutory dividend of 10 per cent. He believed that the committee also found that the companies could raise capital to the extent of 20,000*l.* or 30,000*l.*, upon which consumers would have to pay 10 per cent., even if they expended their capital for building a wall round their premises. He thought that the tendency of the legislature had been to encourage the companies in expending money on useless works rather than to cheapen the price of gas. Speaking as a chemist, he thought the companies were quite justified in employing the best burners.

Mr. Millar asked if it would not be possible to give some information as to the quantity of the cannel coal since the year 1865, as since that time, no doubt for some reason, the quantity of the coal raised had been very much increased.

Mr. Chubb in reply said with reference to the table relating to cannel coal, Mr. Hunt had been employed by the Metropolitan gas companies in 1865, to visit all the collieries in the kingdom for the purpose of procuring the information for them, and it would be both difficult and expensive to obtain the like particulars up to a later date. With respect to the South Metropolitan, it had been candidly admitted that they had reduced their capital—and no doubt one of the gentlemen who had spoken knew best how it had been done—and by that means they were enabled to charge less for their gas. This placed that company in a much more favourable position with the public than the other companies, which was injurious to the latter. He admitted that there had been defective legislation in some respects in relation to gas companies, and that some of them had not been wise in their generation. It should be borne in mind when it was said that the Central Company had greatly reduced the prices charged by all the city companies for gas, that those companies during the time the prices were so reduced by the Great Central paid little or no dividend. The same reduction of dividend took place with the companies on the south side of the Thames, when the Surrey Consumers' Company was established. He admitted that many more tables might be added to the paper, and he promised to endeavour to add to them, and to make the present ones more complete. With reference to the assertion that the gas was not so good now as it was twenty years ago, he would point out that the burner then used for testing gas was not defined in any way. He believed, on the contrary, and it was generally admitted, that the gas was better now than it was then; and that it is rigidly tested at the present time there could be no doubt. He did not deny that some capital had been wasted at the commencement of some of the undertakings, but it was unintentionally wasted, as in the case of railway companies, who often put up stations or works that are afterwards found to be useless. Many objections to the old law were met by the present Act. It had been said that there was not so much sulphur originally in gas as there was now, but the present means of discovering sulphur in gas was greatly improved to what it formerly was.

MISCELLANEA.

CONTENTS:

	PAGE
I.—General Results of the Commercial and Financial History of 1875	381
II.—The Bankers' Clearing House	392
III.—The Domesday Book of 1873	393
IV.—The Census of British India of 1871-72	411
V.—A Table of Peerages, Steps in the Peerage, and Baronetcies, conferred by the several Governments, 1830-74	417

I.—*General Results of the Commercial and Financial History of* 1875.

FROM the *Economist* of the 11th March, 1876:—

"The commercial difficulties, failures, and fall of prices which marked 1874 have been still more severe in 1875. It has been, almost without exception, a bad year in every trade and for every interest, not only in this country, but all over Europe and North and South America. This pressure has now been two years and a-half in operation, reckoning from the American Railway Panic of September, 1873, and it cannot yet be said that there are any clear signs of a better state of things.

"In this country the mercantile failures and defaults of 1875 amount to probably 40 or 50 millions sterling, and the list given in the Appendix (*passim*) is one of the longest and darkest ever compiled for a single year. Out of these vast liabilities the dividends recovered will scarcely average 10 per cent., taking into account the expenses, abuses, and delays of our present bankruptcy system; and the names of Im Thurn, Alexander Collie, the Aberdare Iron Company, and others, will mark for a long time to come the occurrence of disasters fatal to thousands of persons. The failures all over the United States have been even more serious than with ourselves, and the same remark is almost as applicable to Germany and Austria.

"The Foreign Loans Committee of the House of Commons, which sat from March to June, exposed the dishonest and hollow character of the securities of a considerable number of the smaller borrowing states; and the positive repudiation in October by Turkey of part of its obligations, and the apprehended similar repudiation by Egypt, have for some time closed up the class of investments offered by such countries. The same may be said of a very considerable number of the American railway companies.

"In the great trades of iron, coal, hardware, and shipbuilding, 1875 has witnessed an increase of the depression and difficulties of 1874. These trades have been incessantly agitated by strikes and disputes between masters and men. Decreasing employment has compelled the adoption of lower wages, and has enabled the employers to obtain more and better work for the money paid than was possible during the excited period of 1871-73. Indeed, it must be carefully remembered that these great trades have been rendered unprofitable not merely because wages rose inordinately, but because as the wages rose the quantity and quality of the work given for more money became less and less. The workshops were in no small degree a paradise of negligence and incapacity—evils to be cured only by the sharp physic of privation.

"It is now possible by the aid of experience to see pretty clearly what have been the general causes which have led to the diffused commercial suffering of the last two years and a-half.

"The first and the most powerful of these causes was the Franco-German war (August, 1870–April, 1871); the payment of the indemnity of 220 millions sterling by France to Germany (1871-73); and the entrance of Germany, Austria, Hungary, and Italy upon a newer, freer, and more enterprising national career. The suspension for a year of a part of the industrial production in the belligerent countries brought them rather more into the markets of the world, and especially into the English market, as soon as peace was assured; and thus helped to create a great demand beyond the capacity of then existing means of supply; and hence the velocity with which in 1871-72 demand urged on production, especially of the instrumental articles of coal and iron.

"Second—the mania in the United States for building railroads (1868–73), and the consequent large transfers of native and foreign capital from floating to fixed investments, operated in the same direction and in the same way as the demand in central Europe.

"Third—during the same period (1868-73) Russia strained all its resources and all its credit in pursuit of a similar policy of railway, road, and navigation extension.

"Fourth—the opening of the Suez Canal at the end of 1869 created during 1870-73 an urgent demand for a large fleet of steam vessels adapted to the new Indian route; and what is more, so altered and twisted many of the existing modes and channels of business as to create mischief and confusion among the parties engaged in them; and these derangements have been greatly intensified by the completion since 1868 of a very complete telegraphic system between all parts of the world, not excluding China, Australia, and both sides of South America.

"And, fifth—the rapid rise of prices and wages (1871-73) threw large systems of production entirely off their balance. More expenditure and less work took the place of frugality and diligence, and the acquirement of riches seemed to have become all at once so easy, that the old virtues of diligence, skill, and patience could be laid aside both by men and masters.

"Considering the diffusiveness and the force of these causes, it is hardly likely that two and a-half years of reaction will suffice to correct them. The country—France—which, *primâ facie*, suffered most, has, by virtue of those very sufferings, been least affected by the commercial misfortune. The harvest and vintages of the last three years have been very favourable in France, and, with a soil so rich, have doubtless gone far to replace the losses of the war and the indemnity. But the French people have again manifested that wonderful power of conquering adversity, by thrift, patience, skill, invention, and hard work, which has so often saved their country from calamities apparently overwhelming.

" The harvest in this country in 1875 was peculiar and unsatisfactory :—

(I).—*Gazette Average Price of Wheat (per Imperial Quarter) in United Kingdom, immediately after Harvest,* 1863-75, *and Total Average Gazette Price of Calendar Years.*

After Harvest.			Calendar Year Averages.		
	s.	*d.*		*s.*	*d.*
1875	46	–	1875	45	2
'74	46	1	'74	55	9
	46	–		50	6
1873	64	2	1873	58	8
'72	58	6	'72	57	–
'71	56	3	'71	56	8
	59	7		57	5
1870	48	6	1870	46	11
'69	46	2	'69	48	2
'68	53	6	'68	63	9
'67	70	8	'67	64	6
	53	9		55	10
1866	52	6	1866	49	11
'65	42	4	'65	41	10
'64	38	6	'64	40	2
'63	40	–	'63	44	9
	43	4		44	2

" The average of the calendar year 1875 is 45*s.* 2*d.*, or 20 per cent. under the average of 1874—indeed, 1875 is the cheapest year since 1870; and this cheapness has been doubtless a mitigating circumstance. But the farmers all complain, as appears in the reports given *passim.* The weather of the whole year (1875) was cold, ungenial, and unsettled. The spring was one of the coldest, bleakest, and most backward of the century. In July came heavy, chill, and destructive rains, destroying the hay and the roots, and blighting the prospects of any abundant corn crops. For the farmer everything has been dear to buy and cheap to sell, and the reappearance of cattle plague has kept up the excessive cost of all animal food. Free-trade has again vindicated its universal wisdom and beneficence, by bringing corn to our shores from every quarter of the compass; and so rendering really cheap a year which, if left to ourselves, would have been one of dearness and dearth.

(II).—*Silver*, 1875-66, *Shipments to East, Bills Drawn by India Council on India, Imports of Silver into United Kingdom, Average Price in London, and Average Rate of Bank Discounts.* (Pixley and Abell's Circular.)

[0,000's omitted, thus 3,71 = 3,710,000.]

Years.	Silver sent to *East*.	Bills Drawn by India Council.	Imports of *Silver* into United Kingdom.	Silver *Coined* in United Kingdom.	Average Price Standard Silver in London.	Average Bank-rate Discount.
	Mln. £	Mln. £	Mln. £	Mln. £	Per oz. *d.*	Per cnt.
1875....	3,71	16,30	9,50	0,59	$56\frac{7}{8}$	$3\frac{1}{4}$
'74....	7,09	10,36	11,80	0,89	$58\frac{5}{16}$	$3\frac{3}{4}$
'73....	2,50	13,94	12,30	1,08	$59\frac{1}{4}$	$5\frac{1}{2}$
'72....	5,65	10,21	11,14	1,24	$60\frac{5}{16}$	$4\frac{1}{2}$
'71....	3,71	8,44	16,52	0,70	$60\frac{1}{2}$	$3\frac{1}{4}$
1870....	1,58	6,98	10,65	0,33	$60\frac{1}{2}$	3
'69....	2,36	3,70	6,73	0,07	$60\frac{7}{16}$	$3\frac{1}{4}$
'68....	1,63	4,14	7,71	0,30	60	2
'67....	0,64	5,61	8,02	0,19	60	$2\frac{1}{4}$
'66....	2,36	7,00	10,78	0,49	$61\frac{1}{8}$	7

"In 1875, the export of silver to the East was little more than half the export of 1874. The price in London was $56\frac{5}{8}$*d.*, against $58\frac{3}{16}$*d.* in 1874, and 60*d.* in 1873. (The price of $56\frac{5}{8}$*d.* has fallen in February, 1876, to 53*d.*) The India Bills sold in London have risen from 10 to 16 million pounds,

(III).—*Gold and Silver*, 1848-75. *Production in California and United States, according to Statement of Professor Raymond, United States Commissioner of Mining.*

[In Mln. £, 0,000's omitted, thus ,01 = 10,000*l.*]

Year.	Gold.	*Silver.*	Total.
	Mln. £	Mln. £	Mln. £
1848...............	2,00	,01	2,01
'49...............	8,00	,01	8,01
'50	10,00	,01	10,01
Average	6,30	,01	6,41
1851...............	11,00	,01	11,01
'52...............	12,00	,01	12,01
'53...............	13,00	,01	13,01
'54...............	12,00	,01	12,01
'55...............	11,00	,01	11,01
Average	11,80	,01	11,81
1856...............	11,00	,01	11,01
'57...............	11,00	,01	11,01
'58...............	10,00	,01	10,01
'59...............	10,00	,02	10,02
'60...............	9,20	,03	9,23
Average	10,25	,12	10,37
1861	8,60	,40	9,00
'62	7,84	,90	8,74
'63	8,00	1,70	9,70
'64	9,22	2,20	11,42
'65	10,64	2,25	12,89
Average........	8,86	1,45	10,31
1866	10,70	2,00	12,76
'67	10,34	2,70	11,04
'68	9,60	2,40	12,00
'69	9,70	2,60	12,30
'70	10,00	3,20	13,20
Average........	10,07	2,60	12,67
1871	8,70	4,40	13,10
'72	7,20	5,15	12,35
'73	7,20	7,15	14,35
'74	8,43	6,06	14,49
'75	8,40	7,12	15,52
Average........	8,00	6,00	14,00

Cotton Trade.

" Ellison and Co. (Liverpool) report:—

" '1875 was a most unsatisfactory year to nearly everyone engaged in the cotton trade. During the first three months there was at times considerable animation, both in Liverpool and Manchester, and this led to a somewhat confident and roseate view being taken of the future. But subsequent events proved that the activity was entirely artificial, and the hopeful feeling wholly delusive. On the surface there was seeming health and apparent prosperity; but underneath there was actual disease and real rottenness. This was made manifest by the (so far as the cotton trade was concerned) *unprecedented series of gigantic failures*, announced from time to time, as the year advanced, and by the stagnation in business which subsequently ensued, and which even a reduced consumption of 8,000 bales of cotton per week for six weeks in succession failed to remedy. During the last three months there was a little more life, but very little profit; and amidst big losses and very small gains, the year closed unregretted, not only by the cotton trade, but by every other department of industry.

(IV).—*United Kingdom*, 1857-75. *Estimated Value of Raw Cotton Imported, Re-Exported, and Consumed.* (Ellison's Circular.)

[00,000's omitted, thus 42,9 = 42,900,000*l*. The *bales* are given in full.]

Years.	Import.		Re-Exported.	Consumed, United Kingdom.		
	Value.	Price.	Value.	Value.	Total Weight.	Bales per Week, 400 lbs. each.
	Mln. £	Per lb. *d.*	Mln. £	Mln. £	Mln. lbs.	No.
1875........	42,9	$7\frac{1}{16}$	6,1	36,5	1,230,	59,160
'74........	47,1	$7\frac{1}{2}$	6,0	40,2	1,266,	60,870
'73........	54,2	$8\frac{5}{8}$	6,1	45,4	1,246,	59,910
'72........	53,3	$9\frac{5}{16}$	8,5	48,0	1,175,	56,510
1871........	55,9	8	9,8	40,8	1,205,	57,950
'70........	51,0	$9\frac{5}{16}$	8,2	42,1	1,071,	51,520
'69........	55,2	$11\frac{1}{16}$	11,3	43,8	940,	45,140
'68........	52,0	$9\frac{5}{8}$	11,6	41,0	996,	47,890
1867........	53,8	$10\frac{1}{8}$	14,0	41,2	954,	45,890
'66........	75,8	$13\frac{1}{2}$	19,5	51,9	800,	42,829
'65........	63,2	$15\frac{3}{4}$	17,1	47,2	718,	34,550
'64........	82,2	22	22,1	52,4	561,	26,980
1863........	58,0	$20\frac{1}{2}$	21,6	40,7	476,	22,910
'62........	31,1	14	12,4	24,7	449,	21,620
'61........	38,7	$7\frac{3}{8}$	7,9	32,2	1,005,	49,800
'60........	36,6	$6\frac{3}{8}$	5,5	28,9	1,079,	51,890
1859........	32,2	$6\frac{1}{2}$	4,1	27,6	—	47,000
'58........	27,2	$6\frac{5}{8}$	3,3	24,8	907,	Not given
'57........	28,6	$7\frac{1}{8}$	3,5	24,8	825,	

" '*Importers* made a little money during the first three months and in part of October and November, owing to the rise in prices; but, taking the year round, the aggregate balance was on the wrong side. Those spinners who confined their operations to Liverpool (as usual the cheapest market on average), and bought only to meet actual requirements, did fairly well, the average decline in yarns and goods having been less than the fall in cotton; but those who did not adopt this policy were less fortunate. Speculators for the rise did badly; speculators for the fall did well; but the constant apprehension of a reaction tended to keep 'bear' operations within a moderate compass: and the market for 'futures' was rarely very active.

"'The *difference* between the highest and lowest quotations for middling upland on the spot was $1\frac{5}{16}$*d.*, against $1\frac{5}{16}$*d.* in 1874, $2\frac{1}{4}$*d.* in 1873, 2*d.* in 1872, $2\frac{13}{16}$*d.* in 1871, $4\frac{1}{4}$*d.* in 1870, and $2\frac{1}{8}$*d.* in 1869.'

(V.)—*Cotton Cloth and Yarn, Exported and Estimated as Actually Consumed at Home,* 1857-75, *in Millions of Pounds Weight.* (Ellison's Circular.)

[000,000's omitted.]

1	2	3	4	5	6	7	8	9
	Yarns and Cloth Exported.					Average Prices of Raw Cotton.		
Years.	Yarn.	Cloth.	Total.	*Home Consumption,* Yarns and Cloth.	Total Weight.	Imported.	Exported.	Home Consumption.
	Mln. lbs.	Mln. lbs.	Mln. lbs.	Mln. lbs.	Mln. lbs.	Per lb. *d.*	Per lb. *d.*	Per lb. *d.*
1875....	215,	713,	928,	160,	1,088,	$7\frac{1}{16}$	$5\frac{7}{8}$	$7\frac{1}{8}$
'74....	220,	726,	946,	173,	1,120,	$7\frac{1}{2}$	6	$7\frac{5}{8}$
'73....	215,	688,	903,	175,	1,077,	$8\frac{5}{8}$	7	$8\frac{3}{4}$
'72....	212,	698,	910,	129,	1,055,	$9\frac{5}{16}$	$7\frac{1}{2}$	$9\frac{3}{4}$
1871....	193,	680,	873,	199,	1,058,	8	7	$8\frac{1}{4}$
'70....	186,	616,	802,	140,	942,	$9\frac{1}{2}$	$8\frac{1}{2}$	$9\frac{3}{4}$
'69....	169,	535,	704,	112,	829,	$11\frac{1}{4}$	10	$11\frac{1}{4}$
'68....	174,	548,	723,	160,	883,	$9\frac{1}{2}$	$8\frac{3}{4}$	$9\frac{1}{8}$
1867....	164,	523,	687,	145,	832,	$10\frac{1}{2}$	$9\frac{1}{2}$	$10\frac{3}{8}$
'66....	134,	491,	625,	145,	770,	$13\frac{1}{2}$	$11\frac{7}{8}$	14
'65....	98,	377,	475,	150,	625,	$15\frac{3}{4}$	$14\frac{1}{8}$	$15\frac{3}{4}$
'64....	71,	332,	403,	110,	513,	22	$21\frac{1}{2}$	$22\frac{7}{8}$
1863....	70,	321,	392,	93,	485,	$20\frac{1}{8}$	$19\frac{7}{8}$	$20\frac{1}{2}$
'62....	88,	324,	412,	102,	514,	14	$13\frac{3}{4}$	$14\frac{1}{4}$
'61....	177,	496,	674,	174,	848,	$7\frac{3}{8}$	$6\frac{1}{8}$	$7\frac{3}{8}$
'60....	197,	542,	740,	173,	913,	$6\frac{1}{2}$	$5\frac{1}{4}$	$6\frac{1}{2}$
1859....	192,	500,	693,	172,	865,	$6\frac{1}{4}$	$5\frac{3}{4}$	$6\frac{3}{8}$
'58....	200,	452,	652,	158,	810,	$6\frac{5}{8}$	$5\frac{3}{4}$	$6\frac{3}{8}$
'57....	176,	466,	583,	156,	739,	$7\frac{1}{8}$	$6\frac{1}{8}$	$7\frac{1}{4}$

(VI).—*Exports of Cotton Piece Goods,* 1875-73 *and* 1860, *in Quantities (Millions of Yards) and Percentage of Totals.* (Ellison's Circular.)

[000,000's omitted.]

Exported to	Quantities.				Per Cent. of Total.			
	1875.	1874.	1873.	1860.	1875.	1874.	1873.	1860.
	Mln.yds.	Mln.yds	Mln.yds	Mln.yds.	Per cnt.	Per cnt.	Per cnt.	Per cnt.
India and Egypt	1,344,	1,397,	1,340,	910,	37·7	38·8	38·5	32·9
China	436,	463,	401,	324,	12·2	12·9	11·5	11·7
Turkey and Levant	281,	306,	327,	272,	7·9	8·5	9·4	9·8
	2,061,	2,166,	2,068,	1,506,	57·8	60·2	59·4	54·4
United States	80,	105,	109,	226,	2·2	2·9	3·1	8·2
Rest of America and West India	556,	604,	619,	527,	15·6	16·8	17·8	19·0
	2,697,	2,873,	2,796,	2,259,	75·6	80·0	80·3	81·6
Italy, Austria, &c.	213,	207,	234,	198,	6·0	5·8	6·7	7·1
Germany....................	115,	116,	107,	102,	3·3	3·2	3·1	3·7
Other Countries........	532,	401,	343,	217,	15·0	11·1	9·9	7·6
	3,560,	3,603,	3,482,	2,776,	100·0	100·0	100·0	100·0

"The following table completes the series relating to this branch of commerce :—

(VII).—*Cotton Trade, General Results,* 1857-74. *Estimate, per Ellison's Circular of* (1) *Total Value of Goods Produced;* (2) *Cost of Raw Cotton Consumed therefor; and* (3) *Balance left for Profit, Interest, Wages, and Expenses.*

[00,000's omitted.]

Year.	Total Value of Goods Produced.	Cost of Raw Cotton.	Left for Wages, Profit, and other Expenses	Year.	Total Value of Goods Produced.	Cost of Raw Cotton.	Left for Wages, Profit, and other Expenses.
	Mln. £	Mln. £	Mln. £		Mln. £	Mln. £	Mln. £
1875....	95,4	36,5	58,9	1865....	83,2	47,3	35,9
'74....	100,5	40,2	60,3	'64....	76,4	52,5	23,9
'73....	104,6	45,4	59,2	'63....	59,8	40,6	19,2
'72....	102,3	48,0	54,3				
1871....	102,0	40,8	61,2	1862....	42,7	26,7	16,0
'70....	93,1	42,1	51,0	'61....	74,3	32,2	42,1
'69....	86,2	34,8	42,4	'60....	80,6	28,9	51,7
1868....	91,7	41,0	51,7	1859....	72,2	27,6	44,6
'67....	90,4	41,2	49,2	'58....	63,1	24,8	38,3
'66....	102,7	51,9	50,8	'57....	59,8	24,8	35,0

"During the eighteen years 1857-74, the total annual production of gold fell from 23 to 19 millions, or 17 per cent. During the last two or three years the produce has shown a tendency to augment. This tendency seems likely to become important, for the Director of the United States Mint reports that there is good reason to believe that in the current year, 1876, the gold production of California and Nevada will be increased from 6 millions up to 10, chiefly by means of the large yield of the Comstock lode. Such an augmentation would carry the total yield from 19 to 23 millions, or to the level of 1857-61, and would remove many of the difficulties beginning to be felt in consequence of the declining or stationary supplies of gold, in the face of enlarged requirements for the metal on the part of countries which have adopted, or will adopt, a gold standard.

"The range of the rates of discount in the European markets in 1875, as shown by the following Table (VIII), has been within narrow limits:—

(VIII).—*European Rates of Discount,* 1871-75. *Average Annual Rates per Cent. per Annum, at Places as under for First-class Bills, being Abstract of Appendix* (G).

Places.	1875.		1874.		1873.		1872.		1871.	
	Principal Bank.	Open Market.	Principal Bank.	Open Market.	Principal Bank.	Open Market.	Principal Bank.	Open Market.	Principal Bank.	Open Market.
	Pr. cnt.	Per cnt.	Pr. cnt.	Per cnt.	Pr. cnt.	Per cnt.	Pr. cnt.	Per cnt.	Pr. cnt.	Per cnt.
London	3¼	3	3⅔	3½	4	4½	4½	4¼	3	2¾
Paris	4	3¼	4½	4	5¼	5	5¼	4½	6	—
Frankfort	4¼	3⅝	3¾	3⅛	4¾	4½	4½	4	3¾	3½
Amsterdam	4⅗	3¼	3¾	3½	4¾	4½	3½	3	3¼	3⅛
Hamburg	—	3¾	—	3½	—	4½	3½	3	4	3
Brussels	4¾	3½	4½	$4\frac{1}{16}$	5	4¾	4	4	3½	3⅛
Berlin	4⅔	3¾	4½	3¼	5	4½	4½	4	4½	3¾
Vienna........	4⅔	4½	4⅞	4⅞	5¼	5¼	6	5¾	5¾	5½
Petersburg	5¼	5¼	6	5⅞	6¼	6¼	6½	6½	7	6½
Turin	—	—	—	—	—	—	—	—	6	—
Madrid	—	—	—	—	—	—	—	—	5	—

"The next Table (IX) gives for the three years, 1873-75, the bullion reserve (nearly all gold), and the circulation of the official banks of France, Germany, Austria, and Belgium:—

(IX).—*Leading Foreign Banks*, 1873-75. *Notes in Circulation and Bullion Reserve, being Summary of Appendix* (*passim*) *in Million £.*

[00,000's omitted, thus 111,5 = 111,500,000*l.*]

Dates.	Bank of France.		Bank of Prussia.		Bank of Austria.		Bank of Belgium.	
	Notes.	Bullion.	Notes.	Bullion.	Notes.	Bullion.	Notes.	Bullion.
	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £
1873.								
1st January	111,5	31,7	45,5	27,6	32,5	14,2	11,7	4,7
1st July.....................	115,7	31,0	42,7	35,4	35,5	14,4	14,1	5,6
1874.								
1st January	115,8	30,6	44,6	35,2	36,0	14,4	12,6	4,2
1st July.....................	100,9	47,8	42,1	35,5	30,2	14,2	11,8	3,9
1875.								
1st January	105,9	52,8	41,9	30,3	30,1	13,9	13,1	4,7
1st March................	102,7	59,7	37,8	31,0	28,3	14,2	12,8	5,3
1st July.....................	96,9	62,7	43,3	29,8	29,1	13,8	12,9	4,9
1st October	96,5	65,1	36,8	22,8	30,3	13,7	12,7	3,9
1st November	96,2	64,3	35,2	22,6	32,2	13,6	12,6	4,4
1st December	96,0	64,4	34,2	23,2	30,1	13,6	12,5	4,7

Note.—In *France*, through 1873, the market price of *gold* was 2 to 9½, average 7¾ per mille prem.; In bank notes: in 1874, bank notes were at *par;* in 1875, the same.

In *Austria*, in 1873, the premium on gold was 8 per cent.; in 1874 it was 5¼ per cent.; and in 1875 it was 3¼ per cent.

In *Italy*, in 1873, the premium on gold was 9 to 15 per cent.; in 1874 it was 11½ per cent.; and in 1875 it was 8 per cent.

In *Russia*, in 1873, the price of silver was 12 per cent.; in 1874, it was 13 per cent.; and in 1875, it was 15 per cent.

"The most striking part of this table is the addition of 12 million pounds (52 to 64) to the cash reserve of the Bank of France in 1875. That reserve is now more than double what it was ten years ago. The notes of the Bank of France have been at par all through 1874 and 1875. The Bank of Prussia (since 1st January, 1876, the Reichsbank, or Imperial Bank of Germany) has had its cash reserve reduced in 1875 from 30 to 23 million pounds, through the calling in of the small notes. The changes in the other banks are not important.

"'1875 has been generally a dull period, yet in some respects eventful. In our railway world it has served to further develope the very great intrinsic worth of railway property, a subject on which we have always insisted, and never more persistently than during the railway debenture panic some years back. Sound railway property must improve in the passenger department with the increase in the population, while long experience has shown that the goods traffic steadily advances even at a greater rate. Although 1875 has been a dull year in business affairs generally, the *traffic* of all our railways, with barely an exception, has increased considerably in goods as well as passengers. There is ground for the maintenance and advance in the value of railway stocks, although we must admit that their *present price seems sufficiently high.* Still, when we reflect that year after year, in bad times as well as good, the traffic goes on increasing, but with reasonable variation, and that we have passed over the 'coal calamity,' or more properly the 'coal conspiracy,' we cannot but look forward to our railway future with much hope, not only that the present dividends will be maintained, but steadily advanced. Shareholders know how satisfactory were the railway dividends generally for the first half of 1875, and that they will be of the same character for the second (or December) half is evident from the results of the traffic.

"'We never rely upon market price as an indication of actual value. Still it is some indication, and where the property is stable and settled down, price is usually a fair indicator. It may be useful, or at least interesting, to compare the market values of the several railway stocks most dealt in, at the beginning and close of 1875:—

Lines.	January 2, 1875.	December 30, 1875.	Difference.
Bristol and Exeter	121	144	+ 23
Caledonian	108¼	137½	+ 29¼
Glasgow and South-Western	112	110	− 2
Great Eastern	50	49¾	− ¼
,, Northern	142	140½	− 1½
,, Western	129½	120	− 9½
Lancashire and Yorkshire	148	144½	− 3½
Brighton	89¼	117¼	+ 28
London and North-Western	155½	148¾	− 6¾
South-Western	110	126½	+ 16½
Sheffield	79½	88¾	+ 9¼
Metropolitan	67½	102¾	+ 35¼
Midland	139½	145¼	+ 5¾
North British	78	126¾	+ 48¾
,, Eastern	177¼	171½	− 5¾
,, Staffordshire	69	84	+ 15
South Devon	72	75	+ 3
,, Eastern	110½	133	+ 22½
Staines, Wokingham, and Woking 20*l.* shares	20	28	+ 8

"'Several of our great railway stocks have remained about stationary in price during the year, such as the Great Northern, Glasgow and South-Western, and Great Eastern; but the Great Western has suffered a somewhat heavy fall of 9½, while the Bristol and Exeter, which it leases, has obtained, as the consequence of that measure, a great rise.

"'The *immense rise* in the Caledonian, Brighton, Metropolitan, North British, South-Eastern, and Staines, Wokingham, and Woking shares (equal to 40 per cent. rise) appears to be the result of advanced value.

"'The South-Western, Midland, Sheffield, and North Staffordshire have advanced substantially.

"'The Lancashire and Yorkshire, the London and North-Western, and North-Eastern have all gone down a little; but it is a mere fluctuation upon their higher prices.'"

"W. Fallows and Co. (Liverpool) report:—

"'Iron.—1875 was another unsatisfactory year in the iron trade. The extreme prices of 1872 and 1873 led to a severe reaction, which has now extended over a considerable period, and although the fall in prices has been considerable, it is quite uncertain whether the lowest point has yet been reached. The experience of the latter half of 1875 would seem to indicate that we have now reached a period of comparative steadiness, and it may be hoped that the more moderate prices ruling for English iron may lead to some revival both of the home and foreign demand. The extreme fluctuations in prices during 1875 were as follows:—Scotch G.B.M. warrants ranged between 76*s.* and 58*s.*; No. 3 Middlesborough pig iron, between 61*s.* and 49*s.*; Scotch bar iron, between 9*l.* 10*s.* and 8*l.*; North Staffordshire bar iron, between 9*l.* 5*s.* and 8*l.* 5*s.*; hoop iron, between 10*l.* 15*s.* and 9*l.* 10*s.*; and sheet iron, between 12*l.* 10*s.* and 11*l.* 5*s.*

"'This fall in prices was not effected without loss to the masters, as a *reduction in wages* was not attempted until rendered imperatively necessary by the unprofitable nature of the manufacturing trade. Notwithstanding, the men were very indisposed to accept this inevitable necessity, and 1875 has witnessed strikes which have reflected little credit on the intelligence and foresight of the leaders in these movements. In *South Wales* there was a strike which lasted over three months, during which as many as 150,000 men were known to be out of work at one time, and it has been estimated that over 1½ million sterling was lost to the principality in wages alone. The masters at first asked for a 10 per cent. reduction, but after the 'lock-out' was established they declined to reopen their works except at 15 per cent. Ultimately, however, 12½ per cent. was agreed upon. In *North Wales* there was a strike of several weeks duration (beginning in November) against a 15 per cent. reduction, which was declared on the award of parties mutually agreed upon by the masters and men. Eventually the colliers had to give in, and returned to work at the reduction. In *South Staffordshire* the Board of Conciliation, which had worked pretty well for some time under the 'Derby' arrangement, was dissolved at the beginning of September, the representatives of the masters and men being unable to agree on a scale of wages for puddling, &c. Within the last week or two, however, overtures have been made with a view to the reconstruction of the Board, and it is to be hoped these efforts may prove successful. As a set-off to this gloomy picture, it is gratifying to record that the Board of Conciliation in the *North of England* has continued working on satisfactorily during the year, and at the present moment the demand of the masters for a reduction of 15 per cent. has, by mutual agreement, been referred to friendly arbitration. *Now that wages are closely approximating to the old standard,* the result of this arbitration will be watched with considerable interest, as the principle involved in these Boards of Conciliation is being put to the severest test, and it remains to be seen how this will be borne. Speaking generally, it may be said that wages in the coal and iron trades *have been brought down to within* 15 or 20 per cent. of the rates paid in 1868-69, when the lowest prices of the last ten years were touched, and the future range of prices will depend very much on the possibilities of this scale of wages being reached again. In South Wales an agreement has just been concluded with the colliers, by which it is possible (when the minimum average price of coals is 12*s.* per ton f.o.b. to Cardiff) to reduce wages to within 5 per cent of those paid in 1869.'"

II.—*The Bankers' Clearing House.*

A Table showing the percentage upon the annual totals, passed through the Clearing House, of clearances on the Fourths of the month; on the Stock Exchange account days; and on consols settling days; with the proportion of clearances on all the three special days taken together, compared with the amounts passed on the other days of the month, for the nine years 1867-68 to 1875-76.

	Percentage on Annual Total.								
	1867-68.	1868-69.	1869-70.	1870-71.	1871-72.	1872-73.	1873-74	1874-75.	1875-76.
Amount passed on the 4th of the month	4·52	4·58	4·53	4·64	4·28	4·43	4·55	4·26	4·46
Amount passed on the Stock Exchange account days	13·64	15·58	15·99	15·83	17·58	17·20	16·20	17·90	17·80
Amount passed on consols settling days	4·06	4·03	4·00	4·21	4·36	4·06	4·34	4·33	4·48
Total passed on three special days	22·22	24·19	24·52	24·68	26·22	25·69	25·09	26·49	26·74
Total passed on the other days of the month	77·78	75·81	75·48	75·32	73·78	74·31	74·91	73·51	73·26
	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00
Percentage of annual increase	—	8·49	5·28	8·01	33·38	12·01	—	·33	—
Percentage of annual decrease	—	—	—	—	—	—	·16	—	10·08

Note.—The comparative constancy of the proportions of the annual totals passed on the fourths of the month, on account days and on settling days is interesting, especially when taken in relation to the remarkable fluctuations in the aggregate totals each year.

III.—*The Domesday Book of* 1873.[*]

CONTENTS:

PAGE
1.—Introduction to the Digest 393
2.—Extracts from Mr. Lambert's Explanatory Statement 399
3.—Landowners' Return (Classified Topographically) 402
4. Large and Small Owners 404
5. Landowners Classed by Extent of Holdings 408
6. Rateable Value of Lands, Buildings, Railways, Mines, &c... 409

1.—*Introduction to the Digest.*

"No apology, it may be hoped, is needed for producing this brief digest of some prominent facts disclosed by the 'Return of Owners of Land in England and Wales, 1873.' The desire of placing before the public, in a convenient shape and at a moderate price, the lucid and instructive dissertation which Mr. John Lambert, C.B., has prefixed to the voluminous blue book, suggested the idea of the present publication. On reprinting Mr. Lambert's 'Explanatory Statement,' it seemed not out of place to add a few tables, chiefly in amplification and furtherance of the observations which the Secretary of the Local Government Board has made upon the matter and preparation of the return, diffidently helping with some statistical illustrations—illustrations drawn from the return itself, or derived from other official sources—that have a more or less useful bearing on the great record. To the same end the public press of the day has been laid under contribution. What in the following pages is due to the *Times*, the *Pall Mall Gazette*, and the *Spectator*, is acknowledged there.

"The poor rate book has on this occasion, and not for the first time, been taken as the indispensable basis for an inquiry of the highest national importance, though beyond the scope contemplated in its origin as a register of local assessments. The primary valuation of assessable property, the 'gross estimated rental' of each reputed owner, has never failed the compilers of the landowners' return, whatever errors or omissions they otherwise discovered in searching the parish tax roll. A slight account of the parochial assessment returns, as made to Parliament, may be permitted to one having had the honour of serving under that statesman who, if still pursuing the high career from which he was so prematurely cut off, would have looked upon the present record of the owners of the soil with no little interest.

"The first account ever obtained of the annual value of rateable property in this kingdom was collected by direction of Mr. (afterwards Sir George) Cornewall Lewis, when he occupied a seat at the Board of Poor Law Commissioners for England and Wales. The rateable value, as obtained direct from the overseers, proved to be 62,540,000*l.* Previously the property tax valuations of 1815 had been employed for estimating the pressure of the rates; Schedule A, of that, the last year of the old Act, gave 53,495,000*l.* as the total sum assessed.

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[*] *Summary Digest—Return to Parliament of Owners of Land*, 1873, *England and Wales.*—By Frederick Purdy, F.S.S. Stanford, Charing Cross, London.

"It was found, from the returns collected by the Poor Law Commissioners, that landed property then contributed 52 per cent. to the aggregate assessment; dwelling houses 37 per cent.; and all other kinds of property 11 per cent. The relative amounts were these:—

Rateable value in 1840-41 of:*	£
Landed property	32,655,137
Dwelling houses	23,386,401
All other property	6,498,492
Total	62,540,030

"After a lapse of fifteen years, Sir George Lewis obtained a return,† which, combined with a previous one, for the first time represented for the whole country the 'gross estimated rental' as well as the rateable value. The gross estimated rental has always appeared since in the usual returns of valuation to poor's rate. It will not be forgotten that in 1868-69 the gross estimated rental did essential public service, and it now plays its part as an economic exponent. All the authentic valuations, up to the most recent date, are tabulated hereunder:—

Parochial Year.	Poor Rate Valuations.	
	Gross Estimated Rental.	Rateable Value.
	£	£
1840–41	Not known	62,540,030
'46–47	"	67,320,587
'49–50	"	67,700,153
'55–56	86,077,676	71,840,271
'65–66	110,079,308	93,638,403
'67–68	118,431,102	100,668,698
1869–70	123,365,847	104,405,304
'70–71	126,473,924	107,398,242
'71–72	129,038,976	109,447,111
'72–73	132,571,829	112,392,362
'73–74	136,408,462	115,646,631

"The first complete valuation under Mr. Villier's Act is that of 1865-66. The large increase noticeable between that year and 1869-70 is in part due to the equitable augmentation of the parish valuations effected by the Union Assessment Committees. A similar cause has been more recently and largely operative within the metropolitan boundary, and has contributed to swell the valuations in the latter years of the table. Those interested in the history of valuations for local taxation purposes will find Mr. Lambert's statement, at pp. 3 and 8 of the original Digest, of special interest with regard to the extent that 'gross estimated rental' may be accepted as the measure of the owners' actual rental.

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* House of Commons Paper, No. 235, Sess. 1842.

† When Home Secretary.

"The Poor Law Commissioners, in their proceedings with reference to the Parochial Assessments Act of 1836, gave much consideration to an object which, if it had been accomplished, might have borne most usefully on the landowners' return of 1873—the formation of accurately constructed parish maps. In their report of 1840 the Commissioners stated that:—

"'With regard to the maps which have been made under the provisions of that Act, we have endeavoured by all the means in our power to secure for those parishes in which maps were required, accurate and trustworthy documents, which might not only be useful, as conveniently indicating the rateable property and preventing the omission of any portion of it from future rates, but which should also have that degree of accuracy which should cause the maps to be received as evidence in questions of property and boundary, and to be available in the way of assistance to the projectors of great and useful public works.

"'Notwithstanding the assistance we have derived from the Tithe Commissioners towards this important object, we cannot report so favourably as we could wish of the result of our endeavours. Out of the maps which have been made under the Parochial Assessments Act, less than half have been found of that degree of accuracy which would justify their being treated as first-class maps, and their receiving in testimony of such accuracy the seal of the Tithe Commissioners.

"'The remainder, although of considerable utility for parochial rating, and for the apportionment of tithes, have but little claim to value as public documents; and when compared with the maps of the Irish counties, which have been made under the superintendence of the Ordnance, afford grounds for regret that the expenditure thus incurred under the Parochial Assessments Act had not been devoted towards the accomplishment of a detailed survey of England and Wales by the Ordnance Department.'

"The following year they again recounted the difficulties experienced in securing maps sufficiently reliable for the public service.

"'Since our last report we continued, until the close of the year 1840, to issue orders for surveys and valuations, upon application being made to us in the form prescribed by the Parochial Assessment Act.

"'The great expense attending valuations and maps, the existing state of the law, under which valuations, even when made by the highest professional authority, are not binding on the judgment of the overseers, and may be adopted or rejected on their own responsibility, the extreme difficulty of establishing and applying, even with the best assistance of the Tithe Commissioners, any test of the accuracy of maps without resorting to an examination of them on the ground by some independent surveyor (a proceeding which of course enhances the expense of the map to the parish), have tended to discourage us exceedingly in this branch of our duty; and we earnestly desire that the attention of the legislature may be directed to framing some more general systematic mode of valuing, assessing, and surveying the whole of the kingdom, than has hitherto been devised.'

"A very complete set of *tithe* maps has since been collected at the office of the Commissioners in St. James' Square, S.W.

"An important and reliable paper* on the rateable value of different descriptions of property, was laid before the House of Commons, in 1872, by the Right Hon. George J. Göschen, at that time President of the Poor Law Board. The summarised results for the whole kingdom, and for that part of it which is represented by the landowners' return, are these:

Rateable Value of Lands and other Property, 1869-70.

Kind of Property.	All England and Wales.	The Metropolis only.	England and Wales (exclusive of the Metropolis).
	£	£	£
Lands	39,835,098	118,836	39,716,262
Buildings	55,157,290	17,108,736	38,048,554
Railways	4,871,048	617,780	4,253,268
Mines	1,830,146	—	1,830,146
All other kinds of property.	3,176,752	391,568	2,785,184
Total	104,870,334	18,236,920	86,633,414

"The union county details are printed at p. 16 *et seq.*

"The 'thirty thousand landowners' of the census enumerations have now passed into history. Why they were erroneously spoken of as the only holders of land on this side of the Tweed is well known; the error had its source in a peculiarity of the classification of occupations. In the census of 1851, under the agricultural class, 30,315 males and females are placed as 'landed proprietors;' in 1861 these owners were returned as 30,766. In 1871 'landed proprietors' had *decreased* nearly 8,000; the number then returned being 22,964, of whom 14,191 were males and 8,773 females. It is not known that any economic force had in a single decade driven *one-fourth* from their enviable position as landowners; the apparent decline is probably referrible to the elasticity of the classification itself.

"To those who hold to the view that the 'land question,' when it recently emerged as a social and political topic, had reference chiefly, if not solely, to the possessors of the cultivated and improvable soil of the kingdom, a comparative statement of the agricultural and the non-agricultural acres, which together make up the rateable area of England and Wales, may be acceptable. A summary comparison is given in divisions hereunder; the particulars for counties will be found hereafter. (See p. 30 of the original Digest.)

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* The local officers were paid for their labour in collecting the information by a vote of the House.

Rateable Area of England and Wales in 1873.*

Divisions.	Cultivated Lands.	Lands not Cultivated.	Total.
	1,000 acres.	1,000 acres.	1,000 acres.
Metropolitan	Excluded.	—	—
South-Eastern	2,737	797	3,534
„ Midland	2,757	303	3,060
Eastern	2,633	465	3,098
South-Western	3,606	1,013	4,619
West Midland	3,220	432	3,652
North Midland	2,953	394	3,347
„ Western	1,252	298	1,550
York	2,647	610	3,257
Northern	1,863	911	2,774
Wales	2,873	1,250	4,123
Total	26,541	6,473	33,014

"The total area of England and Wales, as stated in the 'explanatory note' was, according to the last census, 37,319,221 acres; deducting the quantity within the metropolitan area, leaves 37,243,859 acres. The extent embraced by the landowners' return, including the estimated extent of waste lands, was 34,538,158 acres; leaving nearly 2¾ million acres to be accounted for. Some part of the land is covered with water; highways and ordinary roads require on the whole a large surface. The water covers 693,000 acres;† there are in England and Wales, according to the fourth report of the Local Government Board, 118,846 miles (say 119,000) of highway and turnpike roads, which, computed at an average breadth of 50 feet,‡ would cover 721,000 acres. This large area is exclusive of the land occupied by the roads and streets of more than 1,000 municipal borough and urban sanitary districts. Mr. Lambert has pointed out that there is great uncertainty about that part of the return purporting to show the extent of waste and common lands. Taking Wales, Lancashire, Northumberland, Lincoln, and Devon, the extent of these portions of the kingdom exceeds the rateable and waste area recognised in the landowners' return by more than 1,000,000 statute acres: this, however, includes the water-covered lands.

"It will be observed that most of the statistics, following hereafter Mr. Lambert's statement, have for this digest been arranged topographically in county divisions, and are so far in harmony with the classified enumeration of the people and their occupations in 1851, 1861, and 1871; the advantages of grouping the counties thus are too obvious to need elucidation.

"Since the issue of the landowners' return, the necessity of some tabulation by scale of its heterogeneous mass of details has been mooted. For an example of a purely statistical method, the county of Rutland, which seemingly is without flaw, has been reduced to graduated order under four several aspects. (See pp. 26, 27 of the original Digest.)

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* The table is read thus: south-eastern division, cultivated lands, 2,737,000 acres; lands not cultivated, 797,000 acres.

† Census of 1871, vol. ii.

‡ I am indebted to Mr. Robert Rawlinson, C.B., for the estimated width.

"Combining the particulars of the tabulations [*a*], [*b*], and [*c*], the following synopsis of individual owners has been formed:—

The Individual Large Owners of Rutland.

Scale of Holdings.	Large Owners.	Average Extent of Holdings.		Average Gross Estimated Rental of each Owner.	
Acres.	No.	A.	R.	£	s.
1	91	1	1	10	3
2	42	2	2	19	15
3	33	3	2	24	12
4	23	4	2	21	19
5	66	7	–	25	8
10	149	24	2	69	5
50	40	69	1	155	5
100	43	201	–	408	1
500	7	624	3	1,198	16
1,000	13	1,661	2	2,574	19
5,000	1	9,181	3	15,096	0
10,000 and upwards	3	13,140	3	19,965	15
Total and average	511	177	1	304	12

"It is certain, from what Mr. Lambert has distinctly intimated (p. 10 of the original Digest), that the entire return is at present too crude for a *strictly scientific* classification of all its items. Any graduated system under which the published facts should be marshalled, therefore, could only at the best be taken as approximative. But closely approximative results, such as might be laboriously drawn from the raw material of this blue book, are frequently the sole guides accessible to the legislator and the economist.

"The Scotch landowners' return, a much lighter work than its English analogue, was published in 1874. On bringing the main totals of both records together, upwards of 1,100,000 owners divide the soil of Great Britain, outside the English metropolitan boundary, between them.

	Number of Owners.	Extent of their Holdings in Acres.	Rental.
			£
England and Wales (less the metropolis)	972,837	33,013,510	99,353,048
All Scotland	131,530	18,946,694*	18,698,804
Great Britain (less London)	1,104,367	51,960,204	118,051,852

* Apparently inclusive of much which would neither in England nor in Wales be rated.

"The experience gained by the Local Government Board in collecting the particulars for this return has brought to light the insufficiency of the present rate books to supply all the requisite particulars. But their defects are probably not difficult to remedy. If it had been essential to the validity of a poor's rate that the name and address of the owner and the extent of his holding should, every time a rate was made, be entered accurately in the rate book as a precedent condition, a vast deal of labour and much uncertainty would have been spared the compilers of the blue book. What, if any, legal consequences should follow the rate book registration of the ownership of land and other assessable property in this country are questions for the legislature to determine.

"It is, of course, impossible to say whether Parliament in future will require more searching inquisition into landowners' property. If it should, the 25-inch parochial maps of the Ordnance Survey, classed and deposited in a central office, would be efficient auxiliaries. At present these maps have been published for a number of parishes, covering 12,000 square miles, and surveys for maps on the same scale, that will embrace upwards of 26,000 square miles more, have been made. If thought advisable to apply any test to 'Gross Estimated Rental' as the measure of an owner's revenue, the invidious search for encumbrances could be carried out in the three Ridings by the Yorkshire registration office, or in extra-metropolitan Middlesex by similar agency. By the same offices the question so often asked as to the frequency with which landed property comes into the market could be answered for two of the richest counties in the kingdom.

"Should Parliament consider the present return of national importance sufficient to justify the expense of a thorough revision, that work could, I venture to suggest, be most conveniently undertaken at the census of 1881, when the machinery of the English enumeration will probably be under the control of the Local Government Board—when the Poor Law Union clerks could be prepared to co-operate with a specially instructed body of enumerators; when a sufficient time should have elapsed to discover all the causes of defect in the so-called *Modern Domesday Book*, then, the *Domesday Book* of the future, having with all its precedent advantages attained fulness and accuracy, could declare in no faltering accents how much it owed to the *Return of Owners of Land in England and Wales*, 1873."

F. P.

7th March, 1876.

2.—*Extracts from Mr. Lambert's Explanatory Statement.*

"'In order that the nature and character of the return, and of the information contained in it, may be correctly appreciated, attention should be given to the following preliminary statement, containing an account of the public documents from which the return is compiled, of the course pursued in its preparation, of the difficulties which have been met with, and how far they have been overcome, and, finally, of the actual value of the results which have been obtained.

"'All the statements and information contained in this return, with the exception of the addresses of the owners, are derived from the valuation lists, which are made out for the purposes of rating, in every parish.

"'A short time prior to the year 1836 the Poor Law Commissioners had issued an order directing that the poor rate should contain certain particulars, but the Parochial Assessment Act of 1836* contains the first statutory provision which requires the poor rate to be made out in a prescribed manner.

"'The present valuation lists are, however, prepared under the provisions of the Union Assessment Committee Act of 1862,† which was introduced by the Right Hon. C. P. Villiers, the then President of the late Poor Law Board. This Act provides for the appointment of an assessment committee by the guardians of every union, for the investigation and supervision of the valuation of the several rateable properties in each parish within the union for the purpose of assessment, and as a preliminary step to such investigation and supervision the overseers of every parish were required to make out a list of all the *rateable* properties in each parish, with the annual values thereof, in the following form, viz.:—

Name of Occupier.	Name of Owner.	Description of Property.	Name or Situation of Property.	Estimated Extent.	Gross Estimated Rental.	Rateable Value.

"'There are now valuation lists in this form for every parish, except in the case of a few single parishes under separate boards of guardians, to which the Union Assessment Committee Act does not apply, but in which the poor rate contains generally the required information.

"'As the valuation lists of the several parishes are deposited with the clerks of the unions, application was made to those officers to prepare and furnish the particulars for the present return, so far as regarded the parishes in their respective unions, corrected as far as practicable from information within their reach, or which might be obtained from the parochial officers, with the addition of the addresses of the owners. Similar applications were made to the clerks to the guardians of single parishes not under the Union Assessment Committee Act.

"'The return comprises the whole of England and Wales, exclusive of the metropolis, and some estimate may be formed of the labour involved in its compilation when it is borne in mind that the information had to be supplied in respect of nearly 15,000 parishes, containing about 5,000,000 separate assessments.

"'It is obvious, from a mere inspection of the form prescribed by the Union Assessment Committee Act, that if the several parish lists were correctly made out, a return of owners of land in each county in England and Wales, and of the estimated area, and the gross estimated rental of the property of each owner in the county, would be simply a consolidation for each county of the information contained in the valuation lists and rate books for the parishes in the county. It was found, however, that the parish lists were defective, especially as regards the names of owners, and notwithstanding all the pains which have been taken, it is to be feared that many inaccuracies will be found in some of the details of the return.' "

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* 6 and 7 Wm. IV, cap. 96. † 25 and 26 Vict., cap. 103, sec. 11.

With regard to the definition of ownership, the following passage is noticeable:—

" 'A more difficult question arose as to lessees for ninety-nine years, the common term of building leases, and also to some other cases.

" 'It was said on the one hand, that the holder of a building lease for ninety-nine years, with occupying tenants under him, especially at the commencement of his term, might fairly be considered as an owner; on the other, that the holder of such a lease, when his term had nearly expired, could not be so considered. In some parts of England lands are frequently held on leases for lives constantly renewed, though without any right of renewal, and the lessees are generally treated as owners, though liable to be turned out on the expiration of the lives. Other cases of doubtful ownership might easily be suggested, and it became clear that only an *arbitrary* line could be drawn.

" 'After much consideration it was determined that lessees for terms exceeding ninety-nine years, or with a *right* of perpetual renewal, should be considered as owners, but that lessees for terms of shorter duration, or for lives, without a right of renewal, should not be so considered.' "

The general conclusion as to the accuracy of the return is conveyed in the subjoined paragraphs.

" 'It will be seen that the return is simply a compilation from *public* documents, existing in each parish throughout England, corrected with such information as the union and parochial officers might possess, and of which, in the discharge of their public duty, it would be incumbent upon them to avail themselves whenever they might be required to prepare fresh valuation lists.

" 'It can only be considered as professing to furnish the names of the several persons who, by common repute in each parish, are believed to be the owners of the separate holdings in respect of which the occupiers are liable to be assessed to the local rates.

" 'In some instances the names of the owners may be found to be improperly given, in some the quantities of the land may be erroneously stated, and in others the gross estimated rental may represent very inaccurately the rent which is received by the reputed owner. In several cases the name of the same person will be found to be entered more than once in a county, owing to the difficulty of identification.'

3.—*Landowners' Return*

Summary for England and Wales (exclusive of the Metropolis). (1) *Population for each Acre;* (5) *Number of Owners of One Acre and upwards;* (6) *Total Number of Owners; and Waste Lands.*

Counties.	Population in 1871.	Inhabited Houses in 1871.	Number of Parishes.	Number of Owners of less than One Acre.
1. THE METROPOLIS.				
Middlesex (part of) .... Surrey (part of) .... Kent (part of)	excluded	—	—	—
2. SOUTH-EASTERN.				
Surrey (part of)	342,113	61,482	137	12,712
Kent (part of)	630,127	117,388	419	26,925
Sussex	417,456	75,385	324	14,675
Southampton	544,684	98,283	345	21,236
Berks	196,475	39,638	193	4,172
3. SOUTH MIDLAND.				
Middlesex (part of)	253,197	44,383	53	9,006
Hertford	192,225	39,056	141	9,556
Buckingham	175,879	37,257	225	6,420
Oxford	177,975	37,849	300	6,833
Northampton	243,891	52,539	346	10,010
Huntingdon	63,708	14,032	107	1,816
Bedford	146,257	30,506	136	5,302
Cambridge	186,906	40,272	176	6,677
4. EASTERN.				
Essex	466,436	92,356	413	14,833
Suffolk	348,869	76,501	525	12,511
Norfolk	438,656	99,428	740	16,552
5. SOUTH-WESTERN.				
Wilts	257,177	54,870	343	9,635
Dorset	195,537	39,410	289	7,494
Devon	601,374	105,200	480	21,647
Cornwall	362,343	73,950	217	8,717
Somerset	463,483	92,205	490	20,370
6. WEST MIDLAND.				
Gloucester	534,640	101,474	391	29,280
Hereford	125,370	26,371	262	9,085
Salop	248,111	50,804	254	7,281
Stafford....	858,326	167,614	249	33,672
Worcester	338,837	69,988	242	16,008
Warwick	634,189	131,442	259	46,894
7. NORTH MIDLAND.				
Leicester	269,311	58,606	334	8,921
Rutland	22,073	4,766	58	861
Lincoln	436,599	94,212	752	13,768
Nottingham	319,758	68,419	275	9,891
Derby	379,394	78,309	331	12,874
8. NORTH-WESTERN.				
Chester	551,201	110,449	502	17,691
Lancaster	2,819,495	530,490	453	76,177

(Classified Topographically).

County; (2) *Inhabited Houses;* (3) *Number of Parishes;* (4) *Number of Owners below an*
(7) *Extent of Lands;* (8) *Gross Estimated Rental;* and (9) *Estimated Extent of Commons*

Number of Owners of One Acre and upwards.	Total Number of Owners.	Extent of Lands.	Gross Estimated Rental.	Estimated Extent of Commons and Waste Lands.	Counties.
		Acres.	£	Acres.	1. THE METROPOLIS.
—	—	—	—	—	Middlesex (part of)
					Surrey (part of)
					Kent (part of)
					2. SOUTH-EASTERN.
4,581	17,293	398,746	2,285,814	40,037	Surrey (part of)
7,758	34,683	950,607	3,347,057	5,302	Kent (part of)
5,059	19,734	869,423	2,418,522	23,738	Sussex
6,235	27,471	884,649	2,469,125	78,844	Southampton
3,068	7,240	430,849	1,010,016	2,144	Berks
					3. SOUTH MIDLAND.
2,875	11,881	143,014	1,611,655	2,592	Middlesex (part of)
2,831	12,387	384,809	1,164,492	5,302	Hertford
3,288	9,708	456,210	1,049,425	2,942	Buckingham
3,344	10,177	449,283	1,073,246	2,949	Oxford
4,455	14,465	592,771	1,637,371	255	Northampton
2,087	3,903	225,163	444,891	796	Huntingdon
2,382	7,684	286,076	716,925	1,127	Bedford
6,496	13,173	522,298	1,179,872	2,555	Cambridge
					4. EASTERN.
7,472	22,305	950,435	2,166,077	6,896	Essex
6,765	19,276	912,437	1,784,827	7,831	Suffolk
10,096	26,648	1,234,884	2,408,795	12,870	Norfolk
					5. SOUTH-WESTERN.
4,378	14,013	828,948	1,599,239	1,931	Wilts
3,409	10,903	573,936	985,041	13,752	Dorset
10,161	31,809	1,516,984	2,881,666	77,868	Devon
5,149	13,866	758,961	1,235,168	70,968	Cornwall
12,395	32,765	940,483	2,705,394	31,246	Somerset
					6. WEST MIDLAND.
8,425	37,705	733,640	2,556,243	7,430	Gloucester
4,646	13,731	506,559	924,640	10,074	Hereford
4,838	12,119	791,941	1,484,833	19,675	Salop
9,699	43,371	638,084	3,630,255	7,809	Stafford
5,796	21,804	441,061	1,685,736	3,415	Worcester
4,622	51,516	541,022	3,318,304	1,833	Warwick
					7. NORTH MIDLAND.
4,927	13,848	519,227	1,493,379	298	Leicester
564	1,425	93,078	184,626	402	Rutland
16,729	30,497	1,606,543	3,173,825	5,763	Lincoln
4,628	14,519	507,337	1,560,853	1,450	Nottingham
6,992	19,866	620,955	1,764,689	11,656	Derby
					8. NORTH-WESTERN.
6,029	23,720	602,219	3,017,224	6,704	Chester
12,558	88,735	947,464	13,878,277	64,306	Lancaster

3.—*Landowners' Return*

Counties.	Population in 1871.	Inhabited Houses in 1871.	Number of Parishes.	Number of Owners below an Acre.
9. YORK DIVISION.				
West Riding	1,874,611	391,949	689	59,496
East "	268,466	56,193	384	15,012
North "	293,278	58,898	553	10,115
10. NORTHERN.				
Durham	685,089	114,705	269	31,205
Northumberland	386,646	62,436	541	10,036
Cumberland	220,253	44,061	208	9,617
Westmoreland	65,010	12,671	109	1,714
11. WELSH.				
Monmouth	195,448	36,169	147	4,970
South Wales	764,339	150,813	650	16,155
North "	452,796	98,521	389	15,467
Totals of England and Wales (exclusive of the Metropolis)	19,458,009	3,841,354	14,700	703,289

4.—*Large and*

Divisions and Counties.	Large Owners.			Small Owners.
	Number of.	Extent of Holding.	Gross Estimated Rental.	Number of.
1. THE METROPOLIS.		Acres.	£	
Middlesex (part of) Surrey (part of) Kent (part of)	excluded.	—	—	—
2. SOUTH-EASTERN.				
Surrey (part of)	4,581	395,885	1,310,111	12,712
Kent (part of)	7,758	942,477	2,320,313	26,925
Sussex	5,059	865,472	1,330,299	14,675
Southampton	6,235	878,899	1,535,230	21,236
Berks	3,068	429,848	900,384	4,172
3. SOUTH MIDLAND.				
Middlesex (part of)	2,875	136,439	990,309	9,006
Hertford	2,831	382,469	914,107	9,556
Buckingham	3,288	455,056	932,553	6,420
Oxford	3,344	448,406	878,753	6,833
Northampton	4,455	589,748	1,349,756	10,010
Huntingdon	2,087	224,763	413,426	1,816
Bedford	2,382	285,250	582,648	5,302
Cambridge	6,496	521,015	1,057,914	6,677

(Classified Topographically)—Contd.

Number of Owners of One Acre and upwards.	Total Number of Owners.	Extent of Lands.	Gross Estimated Rental.	Estimated Extent of Commons and Waste Lands.	Counties.
		Acres.	£	Acres.	9. YORK DIVISION.
17,417	76,913	1,532,346	8,199,840	99,912	West Riding
4,564	19,576	706,684	2,032,195	4,049	East ,,
6,198	16,313	1,017,475	1,841,945	247,409	North ,,
					10. NORTHERN.
3,112	34,317	517,719	2,889,152	47,389	Durham
2,221	12,257	1,190,044	2,144,743	30,286	Northumberland
5,896	15,513	730,811	1,201,980	114,025	Cumberland
2,662	4,376	335,160	442,320	114,282	Westmoreland
					11. WELSH.
2,841	7,811	289,377	837,254	7,594	Monmouth
10,830	26,985	2,196,975	2,964,646	276,233	South Wales
9,068	24,535	1,636,913	1,943,726	50,739	North ,,
269,547	972,836	33,013,510	99,352,303	1,524,648	Totals of England and Wales (exclusive of the Metropolis)

Small Owners.

Small Owners.		Large and Small Owners. [000's omitted from the total holdings and rental.]			Divisions and Counties.
Extent of Holding.	Gross Estimated Rental.	Number of.	Extent of Holding.	Gross Estimated Rental.	
Acres.	£		Acres.	£	1. THE METROPOLIS.
					Middlesex (part of)
—	—	—	—	—	Surrey (part of)
					Kent (part of)
					2. SOUTH-EASTERN.
2,860	975,703	17,293	399,	2,286,	Surrey (part of)
8,128	1,036,744	34,683	951,	3,357,	Kent (part of)
3,950	1,088,223	19,734	869,	2,419,	Sussex
5,749	933,895	27,471	885,	2,469,	Southampton
1,001	109,633	7,240	431,	1,010,	Berks
					3. SOUTH MIDLAND.
6,574	621,347	11,881	143,	1,612,	Middlesex (part of)
2,339	250,385	12,387	385,	1,164,	Hertford
1,153	116,872	9,708	456,	1,049,	Buckingham
876	194,493	10,177	449,	1,073,	Oxford
3,022	287,614	14,465	593,	1,637,	Northampton
399	31,465	3,903	225,	445,	Huntingdon
825	134,277	7,684	286,	717,	Bedford
1,193	121,958	13,173	522,	1,180,	Cambridge

4.—*Large and*

Divisions and Counties.	Large Owners.			Small Owners.
	Number of.	Extent of Holding.	Gross Estimated Rental.	Number of.
		Acres.	£	
4. EASTERN.				
Essex	7,472	946,401	1,849,124	14,833
Suffolk	6,765	908,764	1,428,356	12,511
Norfolk	10,096	1,232,415	1,976,029	16,552
5. SOUTH-WESTERN.				
Wilts	4,378	827,429	1,404,600	9,635
Dorset	3,409	572,304	837,061	7,494
Devon	10,162	1,514,002	2,266,240	21,647
Cornwall	5,149	757,774	1,072,257	8,717
Somerset	12,395	935,255	2,090,110	20,370
6. WEST MIDLAND.				
Gloucester	8,425	727,610	1,511,427	29,280
Hereford	4,646	505,257	810,580	9,085
Salop	4,838	787,395	1,342,107	7,281
Stafford	9,699	633,794	2,656,071	33,672
Worcester	5,796	436,327	1,241,141	16,008
Warwick	4,622	535,137	1,509,406	46,894
7. NORTH MIDLAND.				
Leicester	4,927	517,484	1,079,308	8,921
Rutland	564	92,945	173,732	861
Lincoln	16,729	1,603,718	2,879,597	13,768
Nottingham	4,628	506,070	1,105,612	9,891
Derby	6,992	619,357	1,389,101	12,874
8. NORTH-WESTERN.				
Chester	6,029	597,554	2,011,435	17,691
Lancaster	12,558	932,652	7,340,682	76,177
9. YORK.				
West Riding	17,417	1,519,119	5,027,301	59,496
East ,,	4,564	701,285	1,279,209	15,012
North ,,	6,198	1,015,362	1,542,624	10,115
10. NORTHERN.				
Durham	3,112	512,945	1,910,234	31,205
Northumberland	2,221	1,188,619	1,584,710	10,036
Cumberland	5,896	728,853	902,505	9,617
Westmoreland	2,662	334,824	398,979	1,714
11. WELSH.				
Monmouth	2,841	288,294	709,822	4,970
South Wales	10,830	2,193,097	2,675,684	16,155
North ,,	9,068	1,634,548	1,703,774	15,467
England and Wales	269,547	32,862,317	70,224,621	703,289

Small Owners—Contd.

Small Owners.		Large and Small Owners. [000's omitted from the total holdings and rental.]			Divisions and Counties.
Extent of Holding.	Gross Estimated Rental.	Number of.	Extent of Holding.	Gross Estimated Rental.	
Acres.	£		Acres.	£	
					4. EASTERN.
4,033	316,953	22,305	950,	2,166,	Essex
3,673	356,471	19,276	912,	1,785,	Suffolk
2,468	432,766	26,648	1,235,	2,409,	Norfolk
					5. SOUTH-WESTERN.
1,519	194,639	14,013	829,	1,599,	Wilts
1,631	147,980	10,903	574,	985,	Dorset
2,981	615,426	31,809	1,517,	2,882,	Devon
1,186	162,910	13,866	759,	1,235,	Cornwall
5,227	615,284	32,765	940,	2,705,	Somerset
					6. WEST MIDLAND.
6,030	1,044,815	37,705	734,	2,556,	Gloucester
1,301	114,060	13,731	507,	925,	Hereford
4,544	142,726	12,119	792,	1,485,	Salop
4,289	974,184	43,371	638,	3,630,	Stafford
4,733	444,594	21,804	441,	1,686,	Worcester
5,883	1,808,897	51,516	541,	3,318,	Warwick
					7. NORTH MIDLAND.
1,742	414,070	13,848	519,	1,493,	Leicester
132	10,894	1,425	93,	185,	Rutland
2,824	294,228	30,497	1,607,	3,174,	Lincoln
1,266	455,240	14,519	507,	1,561,	Nottingham
1,598	375,588	19,866	621,	1,765,	Derby
					8. NORTH-WESTERN.
4,664	1,005,789	23,720	602,	3,017,	Chester
14,811	6,537,595	88,735	947,	13,878,	Lancaster
					9. YORK.
13,226	3,172,539	76,913	1,532,	8,200,	West Riding
5,398	752,986	19,576	707,	2,032,	East „
2,113	299,321	16,313	1,017,	1,842,	North „
					10. NORTHERN.
4,773	978,918	34,317	518,	2,889,	Durham
1,424	557,033	12,257	1,190,	2,142,	Northumberland
1,957	299,475	15,513	731,	1,202,	Cumberland
336	43,341	4,376	335,	442,	Westmoreland
					11. WELSH.
1,082	127,432	7,811	289,	837,	Monmouth
3,874	288,962	26,985	2,197,	2,965,	South Wales
2,364	239,952	24,535	1,637,	1,944,	North „
151,151	29,127,687	972,836	33,013,	99,352,	England and Wales

5.—*Landowners Classed according to Extent of Holdings.*

"The *Times* of the 7th April supplied the data for the following important table:—

Number of Owners.	Extent of Individual Holdings.	Aggregate Extent of Holdings.
	Acres.	Acres.
703,289	Under 1	151,000
227,023	1 and less than 100	4,021,000
32,317	100 ,, 500	6,827,000
962,629	Under 500 acres	10,999,000
4,799	500 and less than 1,000	3,318,000
2,719	1,000 ,, 2,000	3,799,000
1,815	2,000 ,, 5,000	5,529,000
581	5,000 ,, 10,000	3,975,000
223	10,000 ,, 20,000	3,099,000
66	20,000 ,, 50,000	1,917,000
3	50,000 ,, 100,000	195,000
1	100,000 and upwards	182,000
10,207	500 acres and upwards	22,014,000
972,836	Under 1 and over 100,000 acres	33,013,000

"Here it will be seen that rather less than *one-third* of the assessable lands of England and Wales, excluding the metropolitan area, is divided between 962,629 owners; and that rather more than *two-thirds* are in the hands of 10,207 persons."

6.—*Mr. Goschen's Return of the Rateable Value of* 1, *Lands;* 2, *Buildings;* 3, *Railways;* 4, *Mines; and* 5, *all other kinds of Property in England, according to the Valuation Lists or Poor Rates which were last in Force during the Year ended Lady-day*, 1870. (*See* 417, *Sess.* 1871.)

Divisions and Union-Counties.	1 Lands.	2 Buildings.	3 Railways.	4 Mines.	5 All other kinds of Property.	6 Total.
1. THE METROPOLIS.	£	£	£	£	£	£
Middlesex (part of)	43,923	13,459,498	333,092	—	292,109	14,128,622
Surrey (part of)	37,397	2,831,316	192,595	—	74,845	3,136,153
Kent (part of)	37,516	817,922	92,093	—	24,614	972,145
Totals	118,836	17,108,736	617,780	—	391,568	18,236,920
2. SOUTH-EASTERN.						
Surrey (part of)...............	395,570	1,277,097	186,935	—	67,050	1,926,652
Kent (part of)	1,330,748	1,507,532	139,145	—	103,527	3,080,952
Sussex..............................	808,346	1,130,655	94,149	—	49,666	2,082,816
Southampton	919,249	1,084,835	83,937	—	35,959	2,123,980
Berks	677,535	451,047	67,232	—	18,027	1,213,841
Totals	4,131,448	5,451,166	571,398	—	274,229	10,428,241
3. SOUTH MIDLAND.						
Middlesex (part of)	325,970	889,591	107,249	—	35,365	1,358,175
Hertford............................	540,148	343,881	102,818	—	15,073	1,001,920
Buckingham	535,334	231,941	44,116	—	9,454	820,845
Oxford	654,739	310,863	13,624	—	10,838	990,064
Northampton	919,952	343,653	93,421	1,200	31,963	1,390,189
Huntingdon	281,539	72,291	22,108	—	3,573	379,511
Bedford	389,213	198,259	57,735	—	11,320	656,518
Cambridge	792,478	281,765	36,813	—	12,961	1,124,017
Totals	4,439,373	2,672,235	477,884	1,200	130,547	7,721,239
4. EASTERN.						
Essex	1,251,420	782,242	71,161	—	45,752	2,150,575
Suffolk..............................	1,142,214	515,961	18,519	—	15,863	1,692,557
Norfolk	1,591,911	619,743	17,271	—	25,379	2,254,304
Totals	3,985,545	1,917,946	106,951	—	86,994	6,097,436
5. SOUTH-WESTERN.						
Wilts	975,435	308,830	69,416	—	16,767	1,370,448
Dorset	612,087	232,434	13,734	—	19,100	877,355
Devon	1,484,984	935,508	55,441	9,414	36,503	2,521,850
Cornwall	766,517	336,334	8,168	6,919	47,191	1,165,129
Somerset..........................	1,663,423	824,054	111,365	17,001	33,249	2,649,092
Totals	5,502,446	2,637,160	258,124	33,334	152,810	8,583,874

Note.—Under 1, "Lands," are included *farmhouses* and *farm buildings, tithe rent-charge*, and *uncommuted tithes* (if any).

Under 2, "Buildings," other than those assessed with farms, are included *houses, shops, warehouses, mills, factories, docks, wharves*, &c.

6.—*Mr. Goschen's Return of the Rateable Value of Property—Contd.*

Divisions and Union-Counties.	1 Lands.	2 Buildings.	3 Railways.	4 Mines.	5 All other kinds of Property.	6 Total.
6. West Midland.	£	£	£	£	£	£
Gloucester	964,698	1,167,605	76,682	30,059	36,980	2,276,024
Hereford	535,041	151,569	13,700	—	16,149	716,459
Salop	1,128,477	338,749	37,642	25,014	53,928	1,583,810
Stafford	1,084,121	1,407,462	133,703	188,383	248,532	3,062,201
Worcester	691,255	731,807	48,016	27,221	67,814	1,566,113
Warwick	869,707	1,563,399	115,912	6,396	82,437	2,637,851
Totals	5,273,299	5,360,591	425,655	277,073	505,840	11,842,458
7. North Midland.						
Leicester	856,499	413,448	47,988	12,949	20,129	1,351,013
Rutland	159,689	19,924	2,735	—	1,773	184,121
Lincoln	2,207,619	485,632	80,320	60	35,685	2,809,316
Nottingham	807,128	589,535	73,068	47,247	27,489	1,544,467
Derby	655,590	450,058	95,947	62,757	45,469	1,309,821
Totals	4,686,525	1,958,597	300,058	123,013	130,545	7,198,738
8. North-Western.						
Chester	960,591	1,257,503	122,869	19,463	116,625	2,477,051
Lancaster	1,589,116	8,629,226	522,436	300,667	426,584	11,468,029
Totals	2,549,707	9,886,729	645,305	320,130	543,209	13,945,080
9. York.						
West Riding	1,962,269	3,508,931	376,701	229,780	294,192	6,371,873
East ,,	870,083	651,242	116,073	—	15,146	1,652,544
North ,,	1,003,964	297,411	95,528	674	21,916	1,419,493
Totals	3,836,316	4,457,584	588,302	230,454	331,254	9,443,910
10. Northern.						
Durham	651,782	1,089,712	313,458	323,017	229,857	2,607,826
Northumberland	922,033	705,922	116,284	113,034	49,655	1,906,928
Cumberland	636,479	306,092	86,986	23,933	17,026	1,070,516
Westmoreland	271,721	89,216	43,618	68	5,866	410,489
Totals	2,482,015	2,190,942	560,346	460,052	302,404	5,995,759
11. Welsh.						
Monmouth	316,663	267,584	77,542	48,617	67,998	778,404
South Wales	1,413,891	881,702	198,102	310,019	156,326	2,960,040
North ,,	1,099,034	366,318	43,601	26,254	103,028	1,638,235
Totals	2,829,588	1,515,604	319,245	384,890	327,352	5,376,679
Totals of England	39,835,098	55,157,290	4,871,048	1,830,146	3,176,752	104,870,334

Under 3, "Railways," inclusive of *stations* and *depots.*

Under 5, "All other kinds of Property," are included *quarries, ironworks, gasworks, canals, saleable underwoods, telegraph wires,* and all other rateable properties which do not properly fall under either of the heads 1, 2, 3, or 4.

IV.—*The Census of British India of* 1871-72.

The earliest systematic attempts to enumerate the people of any portion of British India were probably those of Buchanan Hamilton,* and William Adam.† For many years the revenue surveys, conducted by an unbroken succession of skilled and careful observers, also essayed to estimate the density of population of many of the areas surveyed and mapped. It would be interesting to compare the results therein recorded with those made known by the census of 1871-72. The extent of territory covered by the latest and only general inquiry is so vast, the figures involved are so large, the diversity of races, sects and communities are so complex and bewildering, and all the conditions of the problem to be solved are so inherently difficult of solution, that we can only hope, in the very limited space at our disposal, to place a few of the leading facts on record in our *Journal.*

The first intelligent and intelligible grouping together of the figures collected is contained in a parliamentary paper ‡ published in the past year, and prepared with care, clearness and skill by Mr. H. Waterfield, the chief of the department of Statistics and Commerce at the India Office. From this *précis* we shall borrow the principal figures showing the results of the census, for they give the best general view of the subject yet published.

A careful scrutiny of the figures shows that this census must be regarded more as a creditable, and in the main successful attempt to deal with an exceptionally difficult subject, than as a complete or reliable statement of a class of facts which demands the most vigorous exactness and scientific precision in its treatment. A glance at Mr. Waterfield's excellent abstract, and still more a careful study of the detailed and elaborate returns from which it is compiled, will give but a faint conception of the singular difficulties which had to be encountered and overcome, and of the skill and tact with which they were met and managed. No mere traveller in the East, or student of what has been written regarding India, can understand in what strange mysterious ways the proposal to enumerate the population was interpreted in different parts of the country. Even those who have lived long in Hindostan and acquired much knowledge of the people, are often completely puzzled to account for the fanciful and grotesque forms in which the popular prejudices find expression. In the history of the civil administration of that great empire, abounding as it does in episodes and examples of the great governing power possessed and exhibited by Englishmen to whom large administrative authority has been entrusted, there is none more creditable than the census of 1871-72. The perils from ignorance, superstition, and the imaginary terrors which play so important a part in the uneventful lives of Asiatics, would probably have caused serious commotions had they been unskilfully dealt with.

The area in square miles of the provinces immediately under British rule is stated to be 904,049, with a population of 190,563,048 souls. The extent of the feudatory states is estimated to be 546,695 square miles, with a population of 48,267,910; or in all 1,450,744 square miles, inhabited by 238,830,958 people. In this estimate is not included the population of an important tea district in Eastern Bengal and of some adjacent hill tracts, of which no enumeration was attempted. With this trifling abatement, the returns give throughout British India and its feudatory states an average of 165 persons to the square mile, or excluding the latter, of 211. British India thus stands intermediate between Italy and the German empire in density of population.

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* *Geographical, Statistical, and Historical Description of Hindostan.* By W. Hamilton. 1820.

† *Reports on the State of Education in Bengal.* By William Adam. 1835-38.

‡ *Memorandum on the Census of British India of* 1871-72. 13th July, 1875.

In most parts of India the districts are larger than English counties, and in the valley of the Ganges and the neighbouring districts the density of population was found to average 480 to the square mile, exceeding that of Belgium by more than 7, and that of England by nearly 14 per cent., those being the most thickly peopled countries of Europe.

An attempt is made by Mr. Waterfield to ascertain whether the population of India is increasing, and if so, at what rate. The data for an accurate estimate of this point do not exist, but on the whole, in spite of famines and epidemics widespread and devastating, there does not appear to us to be any real reason to doubt that security to life and property, with increase of the area of cultivation, and improved hygienic conditions, so far as they have been introduced, have been attended with their usual effects, and that the population generally is increasing. The great geological changes going on in the deltas of the great rivers, and the appearance and continuance of cholera since the beginning of the century, together with seasons alternately of droughts or floods, have undoubtedly exercised considerable influence on the mortality of the districts affected by them, but these do not seem to have caused any very general disturbance, while they have been counterbalanced in some degree by improved means of communication, and by greater movement of the population, combined with increased facilities for carrying food where it is needed in times of scarcity and distress.

There surely must, however, be some grave error in the estimated loss of life in the Orissa famine if only 2,086,288 persons survived out of 3,015,826, and these two millions had in the subsequent five years risen to 3,034,690, or more than the population of the province prior to the famine. There is no immigration of permanent settlers into this province from neighbouring districts, and it is simply incredible that a diseased and starved population could have multiplied at this rate in so short a time, without external aid.

The number of inhabited houses in British India is said to be 37,041,468, which gives an average of 41 houses to the square mile, and of 5·14 persons to a house. These proportions vary considerably in different parts of India, so much so that no useful comparison can be instituted between them and the conditions of habitation in other countries. Equally unsatisfactory is the attempt to classify houses from the materials used in their construction.

The 37 millions of houses are grouped into 493,444 villages or townships, giving an average of 75 houses to each, with a population of 386 persons. Of the towns and villages above mentioned, 480,437 are recorded as having a population of less than 5,000, and 1,490 only, or about three in a thousand, have populations of more than 5,000, of which 1,070 contain less than 10,000, 374 between 10,000 and 50,000, and 46 with more than 50,000.

As to sex, the 190,563,048 inhabitants of British India are estimated to consist of 98,054,403 males and 92,501,565 females of all ages, the adults being in each case between 61,000,000 and 62,000,000, but with an excess of males.

In the estimate based on age very little reliance can be placed. Natives of India as a rule are altogether ignorant of their own ages, and have no exact means of estimating correctly the time of their birth.

There is some information, for the most part speculative, on the relative proportion of the sexes and the preponderance of males, which is, in the whole of India, estimated at 5½ millions. Physiology throws little light on the matter, social prejudice much; hence in the next census, when the alarm caused by the first enumeration has subsided, more accurate returns may be expected.

Religion.

The census returns show that roughly calculated the Hindoos (including the Sikhs) number 140½ millions, or 73½ per cent., and the Mahomedans 40¾ millions, or 21½ per cent., while the remaining 9¼ millions, or 5 per cent., includes all other known denominations, as well as those of whom the forms of religious belief have not or could not be ascertained.

This enumeration, tabulated below, is, in our opinion, not altogether reliable, the Hindoos being probably over-estimated, the Mahomedans under-rated, and with the exceptions of the Christians, the Jews, and the Parsees, the remainder being more or less conjectural.

Classified according to Religion.

Hindoos	139,248,568
Sikhs	1,174,436
Mahomedans	40,882,537
Buddhists and Jains	2,832,851
Christians	896,658
Others	5,102,823
Religion not known	425,175
Total	190,563,048

This doubtless will receive attention in the census contemplated in 1881, for it is a matter of considerable political importance, and can be more easily dealt with in the future than it has been in the past. The distinction of the different religious creeds in the lower grades are by no means well marked, the Hindoos have never been given to proselytising, and the Mahomedans have always been aggressive, particularly in the early periods of the Mahomedan invasions of India.

Hindoos.

The distribution of the Hindoos is noted in the subjoined table:—

Bengal	38,975,418
Assam	2,679,507
North-West Provinces	26,568,071
Ajmere	252,996
Oude	10,003,323
Punjab	6,125,460
Central Provinces	5,879,772
Berar	1,912,155
Mysore	4,807,425
Coorg	154,476
British Burma	36,658
Madras	28,863,978
Bombay	12,989,329
Total	139,248,568

The main facts of this distribution are doubtless correct.

The Mussulmans are nearly 41 millions in number, distributed as follows:—

Bengal	19,553,831
Assam	1,104,601
North-West Provinces	4,189,348
Ajmere	62,722
Oude	1,197,704
Punjab	9,337,685
Central Provinces	233,247
Berar	154,951
Mysore	208,991
Coorg	11,304
British Burma	99,846
Madras	1,857,857
Bombay	2,870,450
Total	40,882,537

That Bengal and Assam should have contained more than 20 millions of Mahomedans, and that they should constitute 80 per cent. of the people in some districts was a surprise to every one. Some of these sects have recently attracted much observation, in particular the Wahabees and the Ferazees, who profess to be more orthodox and less contaminated by contact with Hindooism than the bulk of the followers of the Prophet. They will need careful watching should the present critical state of Turkey lead to a general revival of Mahomedan fanaticism, by no means an improbable contingency.

The real division of the Mussulmans of India is into Shias and Sunnis, the other subdivisions being more or less fanciful, and depending on local circumstances.

The Buddhists and Jains, who are not, however, strictly identical, number less than 3 millions.

Buddhists and Jains.

Bengal	84,974
Assam	1,521
Punjab	36,190
Central Provinces	36,569
Mysore	13,263
Coorg	112
British Burma	2,447,831
Madras	21,254
Bombay	191,137
Total	2,832,851

The great majority of them are found, as might be expected, in Burma, and in some unenumerated populations not belonging to India, which border on the Chinese empire.

The Christian religion has throughout India less than a million believers, or in the proportion of less than 1 to every 200 of the population. The proportion is still less if native Christians alone are taken into account, they being reckoned at a little less than 600,000, of whom nearly five-sixths are in the Madras

Presidency. A perusal of the Memoirs of the Abbé Dubois shows how very little claim a large proportion of the latter have to be considered as Christians at all.

	Christians.
Bengal	90,763
Assam	1,947
North-West Provinces	22,196
Ajmere	249
Oude	7,761
Punjab	22,154
Central Provinces	10,477
Berar	903
Mysore	25,676
Coorg	2,410
British Burma	52,299
Madras	533,760
Bombay	126,063
Total	896,658

This is a matter which should engage the serious attention of the various missionary bodies working in the East. The most efficient instrument of conversion is, undoubtedly, education, and amongst Hindoos in particular all influences in matters of religion radiate from above downwards. Convince and convert the Brahmins, and comparatively little difficulty will be experienced with the inferior castes. To do this needs the highest intellectual culture on the part of the missionaries. On the other hand, for the aboriginal tribes, numbering some 11 millions in Bengal alone, a different stamp of man is required, and here alone is sufficient field for the exertions of more missionaries than Great Britain can supply for many years to come.

Those reckoned as "Others," comprising hill tribes, aborigines, Parsees, Jains, &c., are enumerated in the subjoined table :—

Bengal	1,672,058
Assam	16,640
North-West Provinces	586
Ajmere	65
Punjab	945,919
Central Provinces	2,041,276
Berar	163,150
Mysore	57
Coorg	10
British Burma	110,514
Madras	4,328
Bombay	148,220
Total	5,102,823

We regret that want of space compels us to omit the pregnant remarks of Mr. Waterfield on the all-important subjects of nationality and caste, regarding which the information contained in the original reports is of necessity scanty, and for the most part conjectural. We attempted a few years since to gather together information on this subject from the prisoners in the jails of the Lower Provinces, and an excellent beginning was made, but it met with no encouragement from the Government, and was not continued. There is scarcely a caste, class, nationality, occupation, or any other sub-division of the people of India which has not its representatives in the prisons. There they can be studied with a degree of minute care and exactness unattainable elsewhere, hence it is to be hoped that wiser counsels and more enlarged views will prevail among future administrators of provinces, and that so sure, simple, and obvious a field of observation will not continue to be neglected.

The aboriginal tribes and semi-Hindooised aborigines are estimated as follows, viz. :—

Bengal	11,116,883
Assam	1,490,888
North-West Provinces	377,674
Oude	90,490
Punjab	959,720
Central Provinces	1,669,835
Berar	163,059
Mysore	89,067
Coorg	42,516
British Burma	1,004,991
Bombay	711,702
Total	17,716,825

In this direction is a vast, little cultivated, and deeply interesting field for ethnological research, in circumstances of singular and exceptional interest.

The out-castes, or people among whom caste is not recognised, are reputed to be nearly 9 millions.

Bengal	650,477
Assam	22,067
Punjab	36,190
Central Provinces	407,939
Berar	301,379
Mysore	813,975
Coorg	34,100
British Burma	1,585,532
Madras	4,782,757
Bombay	78,582
Total	8,712,998

This enumeration is probably short of the truth, for caste is practically unknown among the aborigines of India, and among the Hindoos themselves, the numbers to whom privileges of caste are denied by the Brahmins, are very large. The whole subject deserves careful and special inquiry in all future censuses, for it will be very long before any of the thousand points of interest connected with the people of India are thoroughly determined and understood.

We have now exhausted our space, and purpose to return to the subject hereafter, for it contains an inexhaustible mine of information, of which it would be difficult to over-estimate the interest and importance.—[Ed.]

V.—*A Table of Peerages, Steps in the Peerage, and Baronetcies, conferred by the several Governments from* 1830-74.*

Reign.	Ministry.	Date.	Nw Peers.				From Irish Peerage.	From Scotch Peerage.		Heirs Apparent.	Total Peerages of United Kingdom.				New Irish Peers.			Steps in the Peerage.									Total Steps.	Baronetcies.
																		United Kingdom.							Ireland.			
			Earls.	Viscounts.	Barons.	Peeresses.	Barons.	Earl.	Barons.	Barons.	Earls.	Viscounts.	Barons.	Peeresses.	Viscount.	Barons.	Peeress.	Baron to Viscount.	Baron to Earl.	Viscount to Earl.	Earl to Marq.	Marquis to Duke.	From Irish Peerage Baron to Earl.	From Scotch Peerage to U. K., Earl.	Marquis to Duke.	Viscount to Earl.		
William IV.	Earl Grey	1830–34	2	—	15	1	9	—	6	4	2	—	34	1	1	1	1	—	1	4	3	2	—	—	—	1	11	35
,,	Sir R. Peel	'35	—	1	3	—	1	—	—	1	—	1	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
,,	Visct. Melbourne	'35-37	—	—	8	1	2	—	—	—	—	—	10	1	—	1	—	—	—	—	—	—	—	—	—	—	—	17
Victoria........	,,	'37–41	1	—	20	1	6	1	2	4	2	—	32	1	—	—	—	1	8	—	1	—	—	—	—	—	10	63
,, ...	Sir R. Peel	'41–46	1	1	2	—	—	—	—	2	1	1	4	—	—	1	—	1	1	—	—	—	—	—	—	—	2	7
,, ...	Lord J. Russell....	'47–51	—	—	8	—	2	—	1	1	—	—	12	—	—	1	—	1	2	—	1	—	—	—	—	—	4	16
,, ...	Earl Derby	'52	—	1	2	—	—	—	—	—	—	1	2	—	—	1	—	—	—	—	—	—	—	—	—	—	—	3
,, ...	Earl Aberdeen	'53	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
,, ...	Visct. Palmerston	'55–58	—	1	7	—	3	—	—	1	—	1	11	—	—	1	—	—	1	—	—	—	—	—	—	—	1	12
,, ...	Earl Derby	'58–59	—	—	7	—	—	—	2	1	—	—	10	—	—	—	—	—	—	1	—	—	—	1	—	—	2	10
,, ...	Visct. Palmerston	'59–64	1	—	8	2	—	—	1	2	1	—	11	2	—	1	—	—	1	—	—	—	—	—	—	—	1	9
,, ...	Earl Russell	'66	—	1	2	—	4	—	1	—	—	1	7	—	—	—	—	—	2	—	—	—	—	—	—	—	2	11
,, ...	Earl Derby	'66–67	—	—	5	—	2	—	—	—	—	—	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13
,, ...	Mr. Disraeli	'68	—	—	6	1	1	—	—	—	—	—	7	1	—	1	—	—	1	—	—	—	1	—	1	—	3	11
,, ...	Mr. Gladstone	'68–74	—	2	27	1	3	—	3	3	—	2	36	1	—	—	—	1	1	1	1	1	—	—	—	—	5	34
Totals			5	7	120	7	33	1	16	20	6	7	189	7	1	8	1	4	18	6	6	3	1	1	1	1	41	249

Note.—At the commencement of the present year the House of Lords consisted of Blood Royal, 5; Archbishops, 2; Dukes, 21; Marquises, 20; Earls, 128; Viscounts, 32; Bishops, 25; Barons, 261; or a total of about 25 per cent. more than at the death of George IV.

* This Table has been framed from a statistical paper prepared by Sir Henry Peek, with reference to the "Irish Peerage Bill."—[Ed.]

REGISTRATION OF THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES—QUARTER ENDED DECEMBER, 1875.

BIRTHS AND DEATHS—QUARTER ENDED MARCH, 1876.

A.—*Serial Table of* MARRIAGES, BIRTHS, *and* DEATHS, *returned in the Years* 1876-70, *and in the* QUARTERS *of those Years.*

Calendar YEARS, 1876-70:—*Numbers.*

Years.........	'76.	'75.	'74.	'73.	'72.	'71.	'70.
Marriages No.	—	200,980	202,010	205,615	201,267	190,112	181,655
Births........ ,,	—	850,187	854,956	829,778	825,907	797,428	792,787
Deaths .... ,,	—	546,317	526,632	492,520	492,265	514,879	515,329

QUARTERS *of each Calendar Year*, 1876-70.

(I.) MARRIAGES:—*Numbers.*

Qrs. ended last day of	'76.	'75.	'74.	'73.	'72.	'71.	'70.
March........ No.	—	42,237	41,413	41,217	40,539	36,305	36,455
June .... ,,	—	48,360	52,827	53,408	50,380	48,831	46,720
September ,,	—	49,817	49,144	49,709	49,818	46,536	43,900
December ,,	—	60,566	58,626	61,281	60,530	58,440	54,580

(II.) BIRTHS:—*Numbers.*

Qrs. ended last day of	'76.	'75.	'74.	'73.	'72.	'71.	'70.
March........ No.	229,980	215,251	214,514	215,744	208,752	209,523	206,366
June .... ,,	—	214,650	217,598	206,516	208,790	201,165	203,615
September ,,	—	210,781	210,323	204,167	201,746	193,271	192,521
December ,,	—	209,505	212,521	203,351	206,619	193,469	190,285

(III.) DEATHS:—*Numbers.*

Qrs. ended last day of	'76.	'75.	'74.	'73.	'72.	'71.	'70.
March........ No.	142,269	162,514	136,518	132,432	134,952	138,393	143,773
June .... ,,	—	130,797	123,907	118,582	120,835	120,793	121,128
September ,,	—	121,459	124,253	114,676	118,927	121,332	124,297
December ,,	—	131,547	141,954	126,830	117,551	134,361	126,131

Annual Rates of MARRIAGES, BIRTHS, *and* DEATHS, *per* 1,000 PERSONS LIVING *in the Years* 1876-70, *and the* QUARTERS *of those Years.*

Calendar YEARS, 1876-70:—*General Ratios.*

YEARS	'76.	Mean '66–75.	'75.	'74.	'73.	'72.	'71.	'70.
Estmtd. Popln. of England *in thousands* in middle of each Year	24,244,	—	23,944,	23,649,	23,356,	23,068,	22,783,	22,501,
Persons Married	—	16·8	16·8	17·1	17·6	17·5	16·7	16·1
Births	—	35·4	35·5	36·2	35·5	35·8	35·0	35·2
Deaths	—	22·2	22·8	22·3	21·1	21·3	22·6	22·9

QUARTERS *of each Calendar Year*, 1876-70.

(I.) PERSONS MARRIED:—*Ratio per* 1,000.

Qrs. ended last day of	'76.	Mean '66–75.	'75.	'74.	'73.	'72.	'71.	'70.
March	—	13·8	14·3	14·2	14·3	14·1	12·9	13·2
June	—	17·1	16·2	17·9	18·3	17·5	17·2	16·7
September	—	16·4	16·5	16·5	16·9	17·1	16·2	15·5
December	—	19·8	20·1	19·7	20·8	20·8	20·4	19·2

(II.) BIRTHS:—*Ratio per* 1,000.

Qrs. ended last day of	'76.	Mean '66–75.	'75.	'74.	'73.	'72.	'71.	'70.
March	38·0	36·9	36·5	36·8	37·5	36·3	37·3	37·3
June	—	36·1	36·0	36·9	35·5	36·3	35·5	36·4
September	—	34·5	34·9	35·3	34·7	34·7	33·7	34·0
December	—	34·5	34·7	35·7	34·5	35·5	33·7	33·6

(III.) DEATHS:—*Ratio per* 1,000.

Qrs. ended last day of	'76.	Mean '66–75.	'75.	'74.	'73.	'72.	'71.	'70.
March	23·5	24·6	27·5	23·4	23·0	23·5	24·7	26·0
June	—	21·4	21·9	21·0	20·4	21·0	21·3	21·6
September	—	21·0	20·1	20·8	19·5	20·5	21·1	22·0
December	—	22·1	21·8	23·8	21·5	20·2	23·4	22·3

B.—*Comparative Table of* Consols, Provisions, Pauperism, *and* Coal *in each of the Nine* Quarters *ended March*, 1876.

1	2	3	4		5	6	7	8	9	10	
Quarters ending	Average Price of Consols (for Money).	Average Rate of Bank of England Discount.	Average Price of Wheat per Quarter in England and Wales.		Average Prices of Meat per lb. at the Metropolitan Meat Market (by the Carcass), with the *Mean* Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism. Quarterly Average of the Number of Paupers relieved on the *last day* of each week.		Sea-borne Coal in London Market per Ton.	
					Beef.	Mutton.		In-door.	Out-door.		
1874	£		*s.*	*d.*	*d. d. d.*	*d. d. d.*	*s. s. s.*			*s.*	*d.*
Mar. 31	92	3·6	62	2	5¼—8¼ 6¾	5½—8¼ 6⅞	112—127 119	146,082	641,910	23	5
June 30	93	3·4	61	1	5—8 6½	5—8¼ 6⅝	135—165 150	133,844	614,641	23	7
Sept. 30	92⅝	3·0	55	5	5¼—8 6⅝	5¼—7¾ 6½	75—104 90	129,993	592,989	23	3
Dec. 31	93	4·7	44	4	4⅞—8¼ 6½	4¾—8 6¼	73—96 84	138,868	587,772	24	7
1875											
Mar. 31	$92\frac{6}{8}$	3·7	42	6	5—8 6½	4¾—8 6½	81—111 96	146,708	622,652	22	5
June 30	$93\frac{6}{8}$	3·5	42	6	5¼—8¼ 6¾	5½—9½ 7½	80—120 100	131,717	592,362	20	8
Sept. 30	94⅜	2·4	49	0	5½—8½ 7	5½—9½ 7½	70—93 82	125,614	555,409	20	4
Dec. 31	94⅜	3·2	46	7	5½—8¼ 6⅞	6—9¼ 7⅝	105—127 116	136,124	546,251	22	6
1876											
Mar. 31	94⅛	4·2	43	8	5½—8 6¾	5½—9 7¼	121—151 136	145,189	557,999	19	9

C.—*General Average Death-Rate Table:—Annual Rate of Mortality to* 1,000 *of the Population in the Eleven Divisions of England.*

Divisions.	Average Annual Rate of Mortality to 1,000 Living in						
	Ten Years, 1861-70.	Year 1875.	1875. Quarters ending				1876.
			March.	June.	Sept.	Dec.	March.
England and Wales	22·4	22·8	27·5	21·9	20·1	21·8	23·5
I. London	24·3	23·7	27·2	21·9	21·5	24·3	24·7
II. South-Eastern counties	19·1	18·8	23·3	18·6	16·1	17·5	19·2
III. South Midland ,,	20·2	20·6	26·2	19·8	17·7	18·8	20·5
IV. Eastern counties	20·1	20·4	24·6	20·2	17·9	19·0	20·3
V. South-Western counties	19·9	20·4	26·0	20·1	15·9	19·6	21·5
VI. West Midland ,,	21·8	22·5	28·3	21·7	19·1	21·0	23·4
VII. North Midland ,,	20·8	22·9	27·3	21·8	21·2	21·2	23·2
VIII. North-Western ,,	26·3	26·2	31·4	24·6	23·3	25·7	29·0
IX. Yorkshire	24·0	24·5	28·1	23·7	22·9	23·5	23·9
X. Northern counties	22·7	24·0	27·3	22·3	23·7	22·6	23·2
XI. Monmouthshire and Wales	21·6	22·6	28·6	23·4	18·1	20·5	23·2

D.—*Special Average Death-Rate Table:*—ANNUAL RATE *of* MORTALITY *per* 1,000 *in* TOWN *and* COUNTRY DISTRICTS *of* ENGLAND *in each Quarter of the Years* 1876-74.

	Area in Statute Acres.	Population Enumerated.	Quarters ending	Annual Rate of Mortality per 1,000 in each Quarter of the Years			
		1871.		1876.	Mean '65-74.	1875.	1874.
In 134 Districts, and 57 Sub-districts, comprising the *Chief Towns*	3,184,419	12,900,142	March ..	25·3	26·6	28·9	25·1
			June	—	22·9	22·7	22·3
			Sept.	—	23·9	22·3	23·4
			Dec.	—	24·8	23·9	26·5
			Year	—	24·6	24·5	24·3
In the remaining Districts and Sub-districts of England and Wales, comprising chiefly *Small Towns* and *Country Parishes*	34,135,802	9,812,124	Year	—	19·3	20·7	19·5
			March ..	21·1	22·0	25·7	21·2
			June	—	19·4	20·8	19·3
			Sept.	—	17·3	17·2	17·4
			Dec.	—	18·6	18·9	20·2

Note.—The three months January, February, March, contain 90, and in leap year 91 days; the three months April, May, June, 91 days; and each of the last two quarters of the year, 92 days. For this inequality a correction is made in calculating the rate of mortality in the different quarters of the year.

E.—*Special Town Table:*—POPULATION; BIRTHS, DEATHS; MEAN TEMPERATURE *and* RAINFALL *in the First Quarter of* 1876, *in* TWENTY-THREE *Large Towns.*

Cities, &c.	Estimated Population in the Middle of the Year 1876.	Births in 13 Weeks ending 1st April, 1876.	Deaths in 13 Weeks ending 1st April, 1876.	Annual Rate to 1,000 Living during the 13 Weeks ending 1st April, 1876.		Mean Temperature in 13 Weeks ending 1st April, 1876.	Rainfall in Inches in 13 Weeks ending 1st April, 1876.
				Births.	Deaths.		
Total of 23 towns in U. K.	8,028,595	78,827	53,544	39·4	26·8	39·4	7·64
London	3,489,428	32,996	21,468	38·0	24·7	39·8	4·76
Brighton	100,632	771	508	30·7	20·3	40·0	6·95
Portsmouth	124,867	999	687	32·1	22·1	—	—
Norwich	83,430	762	452	36·7	21·7	38·8	6·43
Plymouth	72,230	559	457	31·1	25·4	41·9	8·90
Bristol	199,539	1,978	1,366	39·8	27·5	40·1	11·62
Wolverhampton	72,549	770	437	42·6	24·2	38·4	7·01
Birmingham	371,839	4,147	2,451	44·8	26·5	38·9	7·46
Leicester	113,581	1,319	583	46·6	20·6	38·9	6·72
Nottingham	93,627	879	670	37·7	28·7	38·8	6·85
Liverpool	521,544	5,383	4,306	41·4	33·1	39·7	5·29
Manchester	357,917	3,838	3,040	43·0	34·1	—	—
Salford	138,425	1,756	1,193	50·9	34·6	38·7	9·51
Oldham	88,609	1,018	740	46·1	33·5	—	—
Bradford	173,723	1,807	1,169	41·8	27·0	39·6	8·45
Leeds	291,580	3,153	1,876	43·4	25·8	39·5	7·54
Sheffield	274,914	2,882	1,774	42·1	25·9	39·1	9·97
Hull	136,933	1,483	820	43·5	24·0	38·7	7·85
Sunderland	108,343	1,200	523	44·5	19·4	39·9	4·71
Newcastle-on-Tyne	139,929	1,552	891	44·5	25·6	37·1	6·56
Edinburgh	215,146	1,755	1,344	32·7	25·1	—	—
Glasgow	545,144	5,391	4,094	39·7	30·1	—	—
Dublin	314,666	2,429	2,695	31·0	34·4	41·6	5·71

F.—*Divisional Table:*—MARRIAGES *Registered in Quarters ended* 31*st December*, 1875-73; *and* BIRTHS *and* DEATHS *in Quarters ended* 31*st March*, 1876-74.

1	2	3	4	5	6
DIVISIONS. (England and Wales.)	AREA* in Statute Acres.	POPULATION, 1871. (*Persons.*)	MARRIAGES in Quarters ended 31st December.		
			1875.	1874.	1873.
		No.	No.	No.	No.
ENGLD. & WALES.... *Totals*	37,319,221	22,712,266	60,566	61,261	60,277
I. London	75,362	3,254,260	9,803	9,195	9,184
II. South-Eastern	3,994,431	2,167,726	5,295	5,164	4,868
III. South Midland........	3,201,325	1,442,654	3,355	3,365	3,616
IV. Eastern	3,211,441	1,218,728	3,113	3,363	3,227
V. South-Western	4,981,170	1,880,777	3,609	3,802	3,762
VI. West Midland	3,945,460	2,720,669	7,460	7,593	7,392
VII. North Midland........	3,535,445	1,406,935	3,811	4,023	3,897
VIII. North-Western........	1,998,914	3,389,044	9,299	9,227	9,324
IX. Yorkshire	3,702,384	2,395,569	7,229	7,274	7,042
X. Northern	3,547,947	1,414,234	3,816	4,154	4,115
XI. Monmthsh. & Wales	5,125,342	1,421,670	3,776	4,101	3,852

7	8	9	10	11	12	13
DIVISIONS. (England and Wales.)	BIRTHS in Quarters ended 31st March.			DEATHS in Quarters ended 31st March.		
	1876.	1875.	1874.	1876.	1875.	1874.
	No.	No.	No.	No.	No.	No.
ENGLD. & WALES.... *Totals*	229,980	215,251	214,437	142,269	162,514	136,528
I. London	32,996	32,620	31,168	21,468	23,367	20,079
II. South-Eastern	19,058	17,916	18,078	11,311	13,318	11,008
III. South Midland........	13,112	11,865	12,433	7,834	9,743	7,391
IV. Eastern	10,669	10,128	10,117	6,398	7,598	6,254
V. South-Western	14,898	14,362	14,449	10,193	12,210	10,018
VI. West Midland	28,402	26,256	26,702	16,767	19,850	16,117
VII. North Midland........	14,821	13,151	13,369	8,516	9,822	7,729
VIII. North-Western........	38,450	35,505	34,861	26,388	27,894	24,028
IX. Yorkshire	26,899	23,822	24,185	16,026	17,879	14,656
X. Northern	16,614	15,767	15,870	8,756	10,412	9,804
XI. Monmthsh. & Wales	14,061	13,859	13,205	8,612	10,421	9,384

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* These are revised figures, and will be found to differ somewhat from those first published.

G.—*General Meteorological Table, Quarter ended* 31*st March*, 1876.

[Abstracted from the particulars supplied to the Registrar-General by JAMES GLAISHER, ESQ., F.R.S., &c.]

1876. Months.	Temperature of Air. Mean.	Air. Diff. from Average of 105 Years.	Air. Diff. from Average of 35 Years.	Evaporation. Mean.	Evaporation. Diff. from Average of 35 Years.	Dew Point. Mean.	Dew Point. Diff. from Average of 35 Years.	Air—Daily Range. Mean.	Air—Daily Range. Diff. from Average of 35 Years.	Water of the Thames	Elastic Force of Vapour. Mean.	Elastic Force of Vapour. Diff. from Average of 35 Years.	Weight of Vapour in a Cubic Foot of Air. Mean.	Weight of Vapour. Diff. from Average of 35 Years.
	°	°	°	°	°	°	°	°	°	°	In.	In.	Grs.	Gr.
Jan.......	37·1	+0·6	−1·5	35·5	−1·6	33·2	−1·9	11·6	+2·0	39·2	·189	−·012	2·2	−0·2
Feb. ...	41·1	+2·5	+1·9	39·1	+1·7	36·5	+1·6	10·4	−0·9	41·3	·216	+·011	2·5	+0·1
Mar. ...	41·1	0·0	−0·6	38·5	−0·8	35·1	−1·3	14·1	−0·6	42·6	·204	−·012	2·4	−0·1
Mean ...	39·8	+1·0	−0·1	37·7	−0·2	34·9	−0·5	12·0	+0·2	41·0	·203	−·004	2·4	−0·1

1876. Months.	Degree of Humidity. Mean.	Degree of Humidity. Diff. from Average of 35 Years.	Reading of Barometer. Mean.	Reading of Barometer. Diff. from Average of 35 Years.	Weight of a Cubic Foot of Air. Mean.	Weight of a Cubic Foot of Air. Diff. from Average of 35 Years.	Rain. Amnt.	Rain. Diff. from Average of 61 Years.	Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass. Number of Nights it was At or below 30°.	Number of Nights it was Between 30° and 40°.	Number of Nights it was Above 40°.	Lowest Reading at Night.	Highest Reading at Night.
			In.	In.	Grs.	Grs.	In.	In.	Miles.				°	°
Jan.......	85	− 3	30·095	+·355	562	+ 9	1·1	−0·8	278	20	10	1	14·0	41·7
Feb. ...	84	− 1	29·628	−·171	549	− 4	1·5	0·0	375	13	10	6	17·0	44·8
Mar. ...	80	− 2	29·391	−·359	544	− 6	2·3	+0·7	429	11	18	2	18·3	42·7
Mean ...	83	− 2	29·705	−·058	552	0	Sum 4·9	Sum 0·0	Mean 361	Sum 44	Sum 38	Sum 9	Lowest 14·0	Highest 44·8

Note.—In reading this table it will be borne in mind that the sign (−) minus signifies below the average, and that the sign (+) plus signifies above the average.

The mean temperature of the air for January was 37°·1, being 0°·6 above the average of the preceding 105 years; and 1°·5 below the average of the preceding 35 years; it was 4°·6 and 6°·3 below the corresponding values in 1874 and 1875.

The mean temperature of the air for February was 41°·1, being 2°·5 and 1°·9 higher than the average of the preceding 105 years and 35 years respectively; it was 2°·4 and 6°·1 higher than the corresponding values in 1874 and 1875.

The mean temperature of the air for March was 41°·1, being the same as the average value for the preceding 105 years, and 0°·6 below the average of the preceding 35 years; it was 2°·6 lower than that of 1874, and 0°·9 higher than that of 1875.

The mean high day temperatures of the air were 0°·7 and 0°·8 below their respective averages in January and March; but 1°·3 above in February.

The mean low night temperatures of the air were 2°·7 and 0°·2 lower than their respectives averages in January and March; but 2°·2 above in February.

The mean daily ranges of temperature were 0°·9 and 0°·6 smaller than their respective averages in February and March; but 2°·0 larger in January.

H.—*Special Meteorological Table, Quarter ended* 31*st March*, 1876.

1 Names of Stations.	2 Mean Pressure of Dry Air reduced to the Level of the Sea.	3 Highest Reading of the Thermometer.	4 Lowest Reading of the Thermometer.	5 Range of Temperature in the Quarter.	6 Mean Monthly Range of Temperature.	7 Mean Daily Range of Temperature.	8 *Mean Temperature of the Air.*	9 Mean Degree of Humidity.
	in.	°	°	°	°	°	°	
Guernsey	29·681	53·5	27·5	26·0	23·2	7·9	42·5	90
Osborne	29·660	61·1	22·8	38·3	33·2	11·8	40·3	92
Barnstaple	29·641	57·0	21·5	35·5	30·0	9·7	43·0	88
Blackheath	29·671	65·9	21·2	44·7	38·3	12·3	40·0	85
Royston	29·681	59·1	18·4	40·7	35·4	13·7	39·3	87
Norwich	29·624	59·0	23·0	36·0	32·9	9·6	38·9	95
Llandudno	29·602	57·0	22·2	34·8	31·7	10·4	42·0	80
Liverpool	29·615	56·2	21·8	34·4	31·6	9·7	39·8	81
Stonyhurst	29·602	55·1	17·3	37·8	32·1	9·6	38·7	87
Leeds	29·591	60·0	27·0	33·0	30·0	10·8	40·2	83
North Shields	—	55·0	25·0	30·0	27·9	9·5	38·3	84

10	11	12	13	14	15	16	17	18
Names of Stations.	Wind.					Mean Amount of Cloud.	Rain.	
	Mean estimated Strength.	Relative Proportion of					Number of Days on which it fell.	Amount Collected.
		N.	E.	S.	W.			
								in.
Guernsey	1·7	6	6	9	9	6·3	50	10·17
Osborne	0·5	6	6	10	9	7·3	45	7·69
Barnstaple	1·3	6	6	9	10	4·7	51	11·43
Blackheath	1·7	6	6	9	9	7·0	47	5·60
Royston	—	5	4	11	10	6·7	47	6·41
Norwich	—	5	5	11	9	—	49	6·52
Llandudno	1·0	3	6	11	11	6·2	43	7·10
Liverpool	1·5	5	7	10	8	6·7	44	5·53
Stonyhurst	—	6	4	7	13	7·8	64	13·70
Leeds	1·4	6	6	6	12	6·2	49	6·74
North Shields	1·8	7	5	6	12	6·7	62	5·14

No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER ENDED 31ST MARCH, 1876.

I.—*Serial Table:—Number of Births, Deaths, and Marriages in Scotland, and their Proportion to the Population estimated to the Middle of each Year, during each Quarter of the Years* 1876-72 *inclusive.*

	1876.		1875.		1874.		1873.		1872.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1st Quarter—										
Births	32,333	3·67	31,096	3·56	29,837	3·45	30,210	3·52	29,506	3·47
Deaths	21,294	2·41	25,116	2·87	20,775	2·40	21,443	2·50	21,245	2·50
Marriages ..	6,663	0·75	6,369	0·73	6,777	0·78	6,618	0·77	5,820	0·68
Mean Temperature	37°·9		38°·7		40°·9		38°·1		40°·7	
2nd Quarter—										
Births	—	—	32,294	3·70	32,295	3·73	31,283	3·64	30,726	3·61
Deaths	—	—	19,518	2·23	19,640	2·27	19,931	2·32	19,045	2·24
Marriages ..	—	—	6,638	0·76	6,730	0·78	6,690	0·78	6,398	0·75
Mean Temperature	—		50°·73		49°·53		49°·2		49°·2	
3rd Quarter—										
Births	—	—	30,123	3·45	30,702	3·55	28,975	3·38	29,181	3·43
Deaths	—	—	18,050	2·07	18,099	2·09	17,072	1·99	16,692	1·96
Marriages ..	—	—	5,723	0·65	5,582	0·64	5,816	0·68	5,891	0·69
Mean Temperature	—		57°·27		56°·03		55°·4		55°·8	
4th Quarter—										
Births	—	—	30,180	3·45	30,961	3·58	29,270	3·41	29,460	3·46
Deaths	—	—	19,101	2·19	22,162	2·54	18,411	2·15	18,759	2·20
Marriages ..	—	—	7,191	0·82	7,158	0·83	7,606	0·88	7,471	0·88
Mean Temperature	—		41°·7		39°·5		42°·7		41°·8	
Year— Population.	3,527,811		3,495,214		3,462,916		3,430,923		3,399,226	
Births	—	—	123,693	3·54	123,795	3·57	119,738	3·49	118,873	3·49
Deaths	—	—	81,785	2·34	80,676	2·33	76,857	2·24	75,741	2·22
Marriages ..	—	—	25,921	0·74	26,247	0·76	26,730	0·78	25,580	0·75

II.—*Special Average Table:—Number of Births, Deaths, and Marriages in Scotland and in the Town and Country Districts during the Quarter ending* 31*st March*, 1876, *and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

Registration Groups of Districts.	Population.		Total Births.			Illegitimate Births.		
	Census, 1871.	Estimated to Middle of 1876.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,360,018	3,527,811	32,333	3·67	27	2,884	8·9	11·2
Principal towns	1,068,556	1,194,357	11,264	3·77	26	947	8·4	11·9
Large ,, ...	332,180	350,302	3,961	4·52	22	284	7·2	13·9
Small ,, ...	778,164	800,825	7,629	3·81	26	621	8·1	12·3
Mainland rural	1,049,114	1,052,754	8,632	3·28	30	993	11·5	8·7
Insular ,, ...	132,004	129,573	847	2·61	38	39	4·6	21·7

Registration Groups of Districts.	Population.		Deaths.			Marriages.		
	Census, 1871.	Estimated to Middle of 1876.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,360,018	3,527,811	21,294	2·41	41	6,663	0·75	133
Principal towns	1,068,556	1,194,357	8,144	2·73	37	2,750	0·92	109
Large ,, ...	332,180	350,302	2,528	2·89	35	781	0·89	112
Small ,, ...	778,164	800,825	4,740	2·37	42	1,411	0·70	143
Mainland rural	1,049,114	1,052,754	5,217	1·98	50	1,471	0·56	179
Insular ,, ...	132,004	129,573	665	2·05	49	250	0·77	130

III.—*Bastardy Table:—Proportion of Illegitimate in every Hundred Births in the Divisions and Counties of Scotland, during the Quarter ending* 31*st March*, 1876.

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
SCOTLAND	8·9						
Northern	7·7	Shetland	3·2	Forfar	11·0	Lanark........	7·0
		Orkney	6·0	Perth	10·2	Linlithgow .	8·1
North-Western	6·5	Caithness	11·1	Fife	7·2	Edinburgh .	7·5
North-Eastern	16·8	Sutherland....	8·6	Kinross	4·1	Haddington	7·9
East Midland..	9·6	Ross and Cromarty	5·5	Clackmannan	7·3	Berwick	11·5
West Midland.	7·0	Inverness	7·5	Stirling	6·9	Peebles........	6·5
		Nairn	5·7	Dumbarton ..	6·5	Selkirk	12·2
South-Western	6·9	Elgin	21·4	Argyll	8·2	Roxburgh ..	12·0
South-Eastern.	8·0	Banff	18·4	Bute	4·9	Dumfries	16·0
		Aberdeen	16·6	Renfrew........	6·1	Kirkcudbright ..	21·0
Southern	15·7	Kincardine....	11·8	Ayr................	7·1	Wigtown	14·9

IV.—*Divisional Table:*—MARRIAGES, BIRTHS, *and* DEATHS *Registered in the Quarter ended* 31*st March*, 1876.

1 DIVISIONS. (Scotland)	2 AREA in Statute Acres.	3 POPULATION, 1871. (*Persons.*)	4 Marriages.	5 Births.	6 Deaths.
		No.	No.	No.	No.
SCOTLAND .... *Totals*	19,639,377	3,360,018	6,663	32,333	21,294
I. Northern	2,261,622	127,191	195	728	610
II. North-Western........	4,739,876	166,351	301	1,105	890
III. North-Eastern	2,429,594	393,199	559	3,306	1,785
IV. East Midland	2,790,492	559,676	1,042	4,966	3,223
V. West Midland	2,693,176	251,088	405	2,221	1,511
VI. South-Western........	1,462,397	1,183,218	2,925	14,019	9,216
VII. South-Eastern	1,192,524	475,523	959	4,409	2,959
VIII. Southern	2,069,696	203,772	277	1,579	1,100

No. III.—GREAT BRITAIN AND IRELAND.

SUMMARY *of* MARRIAGES, *in the Quarter ended* 31*st December*, 1875; *and* BIRTHS *and* DEATHS, *in the Quarter ended* 31*st March*, 1876.

COUNTRIES.	[000's omitted.]		Marriages.	Per 1,000 of Population.	Births.	Per 1,000 of Population.	Deaths.	Per 1,000 of Population.
	Area in Statute Acres.	Population, 1871. (*Persons.*)						
		No.	No.	Ratio.	No.	Ratio.	No.	Ratio.
England and Wales	37,319,	22,712,	60,566	2·6	229,980	10·1	142,269	6·2
Scotland	19,639,	3,360,	6,663	1·9	32,333	9·6	21,294	6·3
Ireland	20,323,	5,412,	5,433	1·0	37,732	6·9	28,290	5·2
GREAT BRITAIN AND IRELAND	77,281,	31,484,	72,662	2·3	300,045	9·5	191,853	6·7

Note.—The numbers against Ireland represent the marriages, births, and deaths that the local registrars have *succeeded* in recording; but how far the registration approximates to absolute completeness, does not at present appear to be known. It will be seen that the Irish ratios of births, deaths, and marriages are much under those of England and Scotland.—ED. *S. J.*

Trade of United Kingdom, 1876-75-74.—*Distribution of* **Exports*** *from United Kingdom, according to the Declared Real Value of the Exports; and the Declared Real Value (Ex-duty) of* **Imports** *at Port of Entry, and therefore including Freight and Importer's Profit.*

Merchandise (*excluding Gold and Silver*) Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	First Three Months.					
	1876.		1875.		1874.	
	Imports from	*Exports to*	Imports from	*Exports to*	Imports from	*Exports to*
I.—Foreign Countries:	£	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland	4,934,	1,366,	3,361,	1,518,	5,246,	1,981,
Central Europe; viz., Germany, Holland, and Belgium	12,161,	9,594,	11,353,	9,868,	12,020,	11,006,
Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)	15,785,	6,500,	16,137,	5,408,	15,007,	6,548,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	1,821,	2,490,	2,050,	2,129,	1,389,	2,538,
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	6,254,	2,108,	5,272,	2,270,	5,385,	2,918,
Northern Africa; viz., Tripoli, Tunis, Algeria and Morocco	283,	183,	337,	93,	562,	142,
Western Africa	144,	209,	369,	201,	347,	192,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Mooria Islands	91,	126,	181,	115,	94,	112,
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	1,187,	540,	1,118,	692,	954,	429,
South Sea Islands	122,	1,866,	55,	1,	14,	6,
China and Japan, including **Hong Kong**	2,396,	917,	3,148,	2,710,	2,650,	3,033,
United States of America	21,967,	5,458,	21,408,	7,222,	23,447,	9,900,
Mexico and Central America	306,	294,	363,	350,	347,	234,
Foreign West Indies and Hayti	637,	675,	446,	672,	1,075,	592,
South America (Northern), New Granada, Venezuela, and Ecuador	296,	511,	310,	318,	315,	850,
" **(Pacific)**, Peru, Bolivia, Chili, and Patagonia	1,813,	810,	2,265,	1,081,	2,703,	1,081,
" **(Atlantic)** Brazil, Uruguay, and Buenos Ayres	2,285,	2,287,	2,638,	2,746,	2,443,	3,109,
Whale Fisheries; Grnlnd., Davis' Straits, Southn. Whale Fishery, & Falkland Islands	—	7,	—	8,	6,	6,
Total—Foreign Countries	72,482,	35,941,	70,811,	37,402,	74,004,	44,677,
II.—British Possessions:						
British India, Ceylon, and Singapore	9,344,	7,038,	9,041,	6,893,	8,265,	6,428,
Austral. Cols.—N. So. W., Vict., and Queensld.	5,346,	2,441,	4,174,	2,885,	4,962,	2,362,
" " So. Aus., W. Aus., Tasm., and N. Zealand	1,835,	1,188,	1,670,	1,104,	1,991,	1,319,
British North America	327,	1,650,	447,	2,441,	371,	567,
" W. Indies with Btsh. Guiana & Honduras	1,156,	763,	1,205,	757,	1,075,	825,
Cape and Natal	1,097,	1,405,	1,142,	1,100,	1,010,	1,110,
Brt. W. Co. of Af., Ascension and St. Helena	340,	222,	147,	211,	123,	201,
Mauritius	279,	76,	289,	102,	397,	147,
Channel Islands	116,	152,	116,	169,	101,	166,
Total—British Possessions	19,840,	14,935,	18,231,	15,662,	18,295,	13,125,
General Total £	92,322,	50,876,	89,042,	53,064,	92,299,	57,802,

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* *i.e.*, British and Irish produce and manufactures.

IMPORTS.—(United Kingdom.)—**First Three Months** (*January—March*), **1876-75-74-73-72.**—*Declared Real Value (Ex-duty), at Port of Entry (and therefore including Freight and Importer's Profit), of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.*

(Three Months.) [000's omitted.] FOREIGN ARTICLES IMPORTED.		1876.	1875.	1874.	1873.	1872.
		£	£	£	£	£
RAW MATLS.—*Textile*, &c.	Cotton Wool	15,246,	17,164,	16,708,	17,534,	18,539,
	Wool (Sheep's) ..	7,761,	6,783,	7,123,	5,283,	5,572,
	Silk*....................	3,628,	3,535,	3,896,	3,386,	3,641,
	Flax	676,	711,	883,	907,	875,
	Hemp	494,	1,367,	1,370,	1,267,	1,588,
	Indigo	1,185,	1,156,	978,	1,108,	1,586,
		28,990,	30,716,	30,958,	29,485,	31,801,
„ „ *Various.*	Hides	1,556,	1,625,	1,293,	998,	1,019,
	Oils	1,115,	860,	764,	923,	1,029,
	Metals	2,796,	2,521,	2,111,	2,493,	2,979,
	Tallow	805,	445,	701,	538,	717,
	Timber................	1,483,	920,	2,069,	1,534,	1,177,
		7,755,	6,371,	6,938,	6,486,	6,921,
„ „ *Agrcltl.*	Guano	462,	193,	723,	465,	224,
	Seeds	2,604,	2,114,	1,963,	4,693,	2,512,
		3,066,	2,307,	2,689,	2,158,	2,736,
TROPICAL, &c., PRODUCE.	Tea	2,073,	3,269,	2,262,	2,655,	4,011,
	Coffee	1,966,	1,632,	1,747,	1,119,	979,
	Sugar & Molasses	5,102,	3,960,	6,850,	4,059,	4,217,
	Tobacco	512,	656,	644,	653,	498,
	Rice	668,	404,	701,	676,	461,
	Fruits	622,	818,	672,	566,	717,
	Wines	1,678,	1,634,	1,706,	1,137,	1,177,
	Spirits	1,068,	787,	638,	671,	680,
		13,689,	13,160,	15,220,	10,536,	12,740,
FOOD	Grain and Meal.	11,625,	9,372,	13,054,	12,199,	10,069,
	Provisions	7,879,	8,505,	8,330,	6,059,	4,937,
		19,504,	17,877,	21,384,	18,258,	15,006,
Remainder of Enumerated Articles		10,211,	10,041,	6,484,	10,244,	9,999,
TOTAL ENUMERATED IMPORTS		83,215,	80,472,	83,673,	77,167,	79,203,
Add for UNENUMERATED IMPORTS (say)		8,700,	8,750,	8,700,	7,700,	7,900,
TOTAL IMPORTS		91,915,	89,222,	92,374,	84,867,	87,103,

* "Silk," inclusive of manufactured silk, "not made up."

EXPORTS.—(United Kingdom.)—**First Three Months** (*January—March*), **1876-75-74-73-72.**—*Declared Real Value, at Port of Shipment, of Articles of* British *and* Irish *Produce and Manufactures Exported from United Kingdom.*

(Three Months.) [000's omitted.] British Produce, &c., Exported.		1876.	1875.	1874.	1873.	1872.
		£	£	£	£	£
Manfrs.—*Textile.*	Cotton Manufactures..	14,925,	14,409,	15,104,	10,382,	15,382,
	,, Yarn	3,154,	3,109,	3,700,	2,696,	4,069,
	Woollen Manufactures	5,809,	6,219,	6,344,	8,196,	8,328,
	,, Yarn	1,040,	1,133,	1,259,	1,226,	1,870,
	Silk Manufactures........	434,	464,	541,	510,	637,
	,, Yarn	253,	177,	344,	442,	265,
	Linen Manufactures	1,827,	2,072,	2,040,	2,127,	2,219,
	,, Yarn	425,	379,	445,	520,	558,
		27,867,	27,962,	29,777,	26,099,	33,328,
,, *Sewed.*	Apparel	649,	644,	647,	766,	694,
	Haberdy. and Mllnry.	993,	1,349,	1,441,	1,637,	1,589,
		1,642,	1,993,	2,088,	2,403,	2,283,
Metals, &c.	Hardware	923,	992,	991,	1,167,	1,046,
	Machinery	1,627,	1,401,	1,411,	2,061,	1,571,
	Iron	4,459,	5,698,	7,021,	8,376,	6,251,
	Copper and Brass........	715,	746,	714,	941,	669,
	Lead and Tin	303,	288,	453,	262,	418,
	Coals and Culm	1,841,	1,792,	2,899,	2,741,	1,644,
		9,868,	10,917,	13,489,	15,548,	11,599,
Ceramic Manufcts.	Earthenware and Glass	628,	636,	667,	819,	640,
Indigenous Mnfrs. and Products.	Beer and Ale................	568,	655,	731,	674,	648,
	Butter	44,	54,	53,	52,	74,
	Cheese	18,	20,	17,	20,	20,
	Candles	37,	39,	46,	49,	60,
	Salt..............................	104,	138,	108,	152,	80,
	Spirits	68,	57,	39,	59,	51,
	Soda	—	—	—	—	467,
		839,	964,	994,	1,006,	1,400,
Various Manufcts.	Books, Printed	197,	190,	182,	183,	165,
	Furniture	—	—	—	—	—
	Leather Manufactures	780,	789,	695,	171,	930,
	Soap	71,	80,	57,	59,	72,
	Plate and Watches	45,	59,	60,	47,	40,
	Stationery	157,	152,	162,	152,	126,
		1,250,	1,270,	1,156,	612,	1,333,
Remainder of Enumerated Articles		4,652,	5,438,	5,721,	12,089,	3,579,
Unenumerated Articles..............................		4,130,	3,880,	3,910,	3,800,	3,013,
Total Exports....................		50,876,	53,060,	57,802,	62,376,	57,175,

SHIPPING.—(United Kingdom.)—*Account of Tonnage of Vessels Entered and Cleared with Cargoes, from and to Various Countries, during the* Three Months *ended March*, 1876-75-74.

Countries from whence Entered and to which Cleared.	Total British and Foreign.					
	1876.		1875.		1874.	
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.
FOREIGN COUNTRIES.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Russia { Northern ports	32,084	14,235	26,889	15,394	76,219	42,056
Russia { Southern ,, ...	107,138	57,942	97,593	29,074	70,589	28,905
Sweden	117,779	88,470	43,534	45,514	166,449	107,260
Norway	191,453	44,725	52,368	46,023	176,181	50,115
Denmark..................................	54,542	94,872	30,617	70,588	44,511	115,411
Germany..................................	268,995	388,810	240,741	334,229	305,414	399,039
Holland	219,278	237,841	198,833	213,872	193,603	205,668
Belgium	229,978	255,215	206,748	234,594	212,870	204,457
France..................................	466,439	754,080	476,154	635,359	396,466	597,981
Spain	214,688	163,582	183,693	136,134	222,300	163,524
Portugal	67,216	88,140	73,156	79,062	83,986	88,552
Italy..................................	80,530	217,338	76,421	186,210	56,160	202,025
Austrian territories	9,104	25,112	14,572	16,794	6,513	21,123
Greece..................................	4,237	14,961	39,364	15,187	26,051	13,338
Turkey (including Wallachia and Moldavia) .... }	87,876	77,149	65,904	62,339	55,210	83,882
Egypt	139,602	114,041	86,300	98,947	90,503	145,652
United States of America	984,891	540,191	823,134	488,042	956,450	545,797
Mexico, Foreign West Indies, and Central America .... }	43,400	129,898	49,717	128,233	77,061	131,484
Brazil	59,420	94,412	63,241	97,675	57,424	130,114
Peru	58,182	9,353	53,101	38,853	92,564	16,899
Chili	9,534	89,947	11,943	72,510	17,270	54,713
China	23,601	2,277	35,415	8,842	26,342	2,608
Other countries	139,144	129,977	136,933	139,462	142,975	154,576
Total, Foreign Countries	3,609,111	3,582,568	3,086,371	3,192,917	3,553,111	3,505,179
BRITISH POSSESSIONS.						
North American Colonies	29,514	58,888	47,623	34,862	34,820	66,178
East Indies, including Ceylon, Singapore, and Mauritius .... }	288,717	309,042	225,514	326,088	221,733	252,429
Australia and New Zealand	87,897	109,953	61,891	135,362	78,511	126,650
West Indies	20,471	45,298	24,060	45,382	17,987	36,945
Channel Islands..................	49,047	36,887	46,929	34,345	54,328	33,568
Other possessions	64,522	215,536	55,776	172,903	58,587	224,528
Total, British Possessions	540,168	775,604	461,793	748,942	465,966	740,298
TOTAL FOREIGN COUNTRIES AND BRITISH POSSESSIONS.						
Three months ended March, { 1876........	4,149,279	4,358,172	—	—	—	—
Three months ended March, { '75........	—	—	3,548,164	3,941,859	—	—
Three months ended March, { '74........	—	—	—	—	4,091,077	4,245,477

GOLD AND SILVER BULLION AND SPECIE.—IMPORTED AND EXPORTED.—(United Kingdom.)—*Declared Real Value for the* Three Months (*January—March*), 1876-75-74.

[000's omitted.]

(First Three Months.)	1876.		1875.		1874.	
	Gold.	*Silver.*	Gold.	*Silver.*	Gold.	*Silver.*
Imported from—	£	£	£	£	£	£
Australia	1,055,	8,	1,597,	13,	1,382,	6,
So. Amca., including Mexico and W. Indies	245,	861,	269,	1,009,	613,	966
United States	538,	635,	1,738,	665,	53,	1,144,
	1,838,	1,504,	3,604,	1,687,	2,048,	2,116,
France	133,	425,	388,	229,	149,	253,
Germany, Holl. & Belg.	852,	266,	240,	511,	128,	1,148,
Prtgl., Spain, and Gbrltr.	270,	19,	17,	11,	9,	10,
Mlta., Trky., and Egypt	5,	3,	25,	8,	235,	2,
China, including Hong Kong	193,	11,	28,	7,	161,	149,
West Coast of Africa	45,	2,	31,	7,	14,	2,
All other Countries	731,	181,	663,	108,	172,	500,
Totals Imported	4,067,	2,411,	4,996,	2,568,	2,916,	4,180,
Exported to—						
France	1,555,	549,	3,242,	493,	810,	241,
Germany, Holl. & Belg.	1,068,	259,	1,040,	93,	698,	125,
Prtgl., Spain, and Gbrltr.	9,	25,	27,	273,	39,	96,
	2,632,	823,	4,309,	859,	1,547,	462,
Ind. and China	7,	1,401,*	172,	—	172,	2,996,
United States	5,	—	234,	26,	1,	—
South Africa	—	—	—	—	4,	10,
So. Amca., including Mexico and W. Indies	76,	—	354,	—	185,	—
All other Countries	493,	111,	386,	1,510,	1,301,	324,
Totals Exported	3,213,	2,335,	3,455,	2,395,	3,210,	3,792,

* This entry is now shown direct, instead of to Egypt as formerly.

REVENUE.—(UNITED KINGDOM.)—31ST MARCH, 1876-75-74-73.

Net Produce in QUARTERS *and* YEARS *ended* 31*st* MARCH, 1876-75-74-73.

[000's omitted.]

QUARTERS, ended 31st March.	1876.	1875.	1876.		Corresponding Quarters.	
			Less.	More.	1874.	1873.
	£	£	£	£	£	£
Customs	5,074,	4,794,	—	280,	4,898,	5,299,
Excise	8,320,	8,551,	231,	—	8,524,	7,914,
Stamps	2,899,	2,775,	—	124,	2,693,	2,615,
Taxes	1,890,	1,850,	—	40,	1,848,	1,881,
Post Office	1,437,	1,420,	—	17,	1,500,	1,240,
Telegraph Service	295,	220,	—	75,	359,	280,
	19,915,	19,610,	231,	536,	19,822,	19,229,
Property Tax	2,822,	2,634,	—	188,	3,794,	4,934,
	22,737,	22,244,	231,	724,	23,616,	24,163,
Crown Lands	99,	99,	—	—	95,	110,
Miscellaneous............	883,	620,	—	263,	836,	651,
Totals	23,719,	22,963,	231,	987,	24,547,	24,924,
			NET INCR. £756.			

YEARS, ended 31st March.	1876.	1875.	1876.		Corresponding Years.	
			Less.	More.	1874.	1873.
	£	£	£	£	£	£
Customs	20,020,	19,289,	—	731,	20,339,	21,033,
Excise	27,626,	27,395,	—	231,	27,172,	25,785,
Stamps	11,002,	10,540,	—	462,	10,550,	9,947,
Taxes	2,496,	2,440,	—	56,	2,324,	2,337,
Post Office	5,950,	5,670,	—	280,	5,792,	4,820,
Telegraph Service	1,245,	1,120,	—	125,	1,210,	1,015,
	68,339,	66,454,	—	1,885,	67,387,	64,937,
Property Tax	4,109,	4,306,	197,	—	5,691,	7,500,
	72,448,	70,760,	197,	1,885,	73,078,	72,437,
Crown Lands	395,	385,	—	10,	375,	375,
Miscellaneous............	4,289,	3,777,	—	512,	3,883,	3,797,
Totals	77,132,	74,922,	197,	2,397,	77,336,	76,609
			NET INCR. £2,200,			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 31ST MARCH, 1876:—

An Account showing the REVENUE *and other* RECEIPTS *in the* QUARTER *ended* 31*st March*, 1876; *the* ISSUES *out of the same, and the Charges on the Consolidated Fund at that Date, and the Surplus or Deficiency of the Balance in the Exchequer on the* 31*st of March*, 1876, *in respect of such Charges.*

Received:—

		£
Income received, as shown in Account I		23,719,648
Amount raised on account of Local Loans, by Exchequer Bonds		950,000
Amount raised for purchase of Shares of the British Government in the Suez Canal (in part)		3,300,000
Amount received in Repayment of Advances for Public Works, &c.		221,569
,, for Greenwich Hospital		60,560
Total		£28,251,777
Excess of the Sums charged on the Consolidated Fund on the 31st of March, 1876, payable in June quarter, 1876, above the Balance in the Exchequer at that date, viz.:—		
Excess of Charge in Great Britain	£2,435,996	
Surplus over Charge in Ireland	788,029	
Net deficiency		*1,647,967
		£29,899,744

Paid:—

		£
Net deficiency of the balance in the Exchequer to meet the charge on the 31st of December, 1875, as per last account		4,929,819
Amount applied out of the Income to *Supply Services*		12,314,872
Purchase of the Shares of the British Government in the Suez Canal (covered by money raised)		4,000,000
Amount advanced for Greenwich Hospital		60,560
Charge of the *Consolidated Fund* on the 31st of March, 1876, viz.:—		
Permanent Charge of Debt—		
Interest of the Permanent Debt	£4,847,611	
Terminable Annuities	1,658,894	
Interest of Exchequer Bills	19,251	
,, of Deficiency Advances	3,010	
New Sinking Fund	280,151	
		6,808,917
Interest, &c., on Local Loans		30,625
Other Consolidated Fund Charges:—		
The Civil List	101,519	
Other Charges including 200,000*l.* for localisation of the Military Forces	478,115	
Principal of Exchequer Bills	20,000	
Advances for Public Works, &c.	1,155,317	
		8,594,493
Total		£29,899,744

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* Charge on 31st March, 1876 (as above)	£8,594,492
Paid out of Growing Produce in March quarter, 1876	1,826,938
Portion of the Charge payable in June quarter, 1876	6,767,554
To meet which there was in the Exchequer on the 31st of March, 1876	5,119,587
Net deficiency as above	1,647,967

BRITISH CORN.—*Gazette Average Prices* (England and Wales), *First Quarter of* 1876.

[This Table is communicated by the Statistical and Corn Department, Board of Trade.]

Weeks ended on Saturday.	Weekly Average. (Per Impl. Quarter.)					
	Wheat.		Barley.		Oats.	
1876.	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
January 1	45	3	34	6	24	4
,, 8	45	1	34	5	23	10
,, 15	44	7	34	3	23	10
,, 22	44	9	34	2	23	10
,, 29	44	2	35	–	25	4
Average for January	44	9	34	5	24	2
February 5	43	7	34	1	24	5
,, 12	43	–	33	7	24	5
,, 19	42	8	32	10	24	5
,, 26	43	3	33	4	24	7
Average for February	43	1	33	5	24	5
March 4	43	–	32	7	25	4
,, 11	42	11	32	6	24	1
,, 18	42	9	32	8	25	6
,, 25	42	4	33	1	25	5
Average for March	43	–	32	8	25	1

BANK OF ENGLAND.—WEEKLY RETURN.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), *for Wednesday in each Week, during the* FIRST QUARTER (*January—March*) *of* 1876.

[0,000's omitted.]

1	2	3	4	5	6	7	
ISSUE DEPARTMENT.					COLLATERAL COLUMNS.		
Liabilities.		Assets.					
Notes Issued.	DATES. (Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.	Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.	
£ Mlns.	1876.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1876.	Per cnt.
35,53	Jan. 5	11,02	3,98	20,54	28,08	6 Jan.	5
35,88	,, 12	11,02	3,98	20,88	27,63		
36,16	,, 19	11,02	3,98	21,16	27,31		
36,39	,, 26	11,02	3,98	21,39	26,77	27 ,,	4½
36,50	Feb. 2	11,02	3,98	21,50	27,09		
36,50	,, 9	11,02	3,98	21,50	26,69		
37,01	,, 16	11,02	3,98	22,00	26,39		
37,19	,, 23	11,02	3,98	22,19	26,19		
37,29	Mar. 1	11,02	3,98	22,29	26,54		
37,50	,, 8	11,02	3,98	22,41	26,48		
37,95	,, 15	11,02	3,98	22,95	26,34		
38,72	,, 22	11,02	3,98	23,71	26,18	23 Mar.	3½
39,01	,, 29	11,02	3,98	24,01	26,82		

BANKING DEPARTMENT.

8	9	10	11	12	13	14	15	16	17	18
Liabilities.					DATES. (Wdnsdys.)	Assets.				Totals of Liabilities and Assets.
Capital and Rest.		Deposits.		Seven Day and other Bills.		Securities.		Reserve.		
Capital.	Rest.	Public.	Private.			Government.	Other.	Notes.	Gold and Silver Coin.	
£ Mlns.	£ Mlns.	£ Mlns	£ Mlns.	£ Mlns.	1876.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
14,55	3,25	8,48	29,46	,34	Jan. 5	16,29	21,66	7,45	,68	92,16
14,55	3,32	4,53	19,89	,34	,, 12	16,29	17,38	8,25	,72	85,28
14,55	3,45	6,62	19,71	,32	,, 19	15,79	17,09	8,85	,82	85,10
14,55	3,34	4,83	19,16	,30	,, 26	14,59	17,12	9,62	,86	84,38
14,55	3,36	5,13	18,40	,32	Feb. 2	13,89	17,71	9,31	,86	82,52
14,55	3,38	6,56	18,31	,31	,, 9	13,89	18,48	9,81	,93	86,22
14,55	3,41	7,93	18,44	,32	,, 16	13,89	19,35	10,62	,80	89,28
14,55	3,39	8,94	18,05	,28	,, 23	13,89	19,46	11,00	,87	90,42
14,55	3,68	9,30	18,78	,30	Mar. 1	13,89	20,98	10,75	,99	93,22
14,55	3,69	10,57	18,31	,32	,, 8	13,85	21,43	11,02	1,13	94,88
14,55	3,70	10,01	19,69	,30	,, 15	13,85	21,81	11,61	,99	96,52
14,55	3,72	9,09	19,63	,29	,, 22	13,85	19,94	12,54	,95	94,56
14,55	3,73	9,80	19,02	,29	,, 29	14,36	12,19	12,19	,99	94,78

LONDON CLEARING; CIRCULATION, PRIVATE AND PROVINCIAL.

The London Clearing, and the Average Amount of Promissory Notes in Circulation in ENGLAND *and* WALES *on Saturday in each Week during the* FIRST QUARTER (*January—March*) *of* 1876; *and in* SCOTLAND *and* IRELAND, *at the Three Dates, as under.*

[0,000's omitted.]

ENGLAND AND WALES.					SCOTLAND.				IRELAND.		
DATES. *Saturday.*	*London:* Cleared in each Week ended *Wednesday.**	Private Banks. (Fixed Issues, 3,81).	Joint Stock Banks. (Fixed Issues, 2,65).	TOTAL. (Fixed Issues, 6,47).	Weeks ended	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 2,75).	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 6,35).
1876.	£	£	£	£	1876.	£	£	£	£	£	£
Jan. 8	135,90	2,56	2,32	4,88							
„ 15	98,31	2,57	2,34	4,91							
„ 22	128,13	2,55	2,31	4,92	Jan. 22	2,01	3,86	5,87	4,09	3,56	7,65
„ 29	90,38	2,52	2,30	4,82							
Feb. 5	125,44	2,49	2,31	4,86							
„ 12	92,43	2,44	2,29	4,73							
„ 19	115,09	2,40	2,26	4,73	Feb. 19	1,90	3,72	5,62	4,11	3,50	7,61
„ 26	87,84	2,37	2,25	4,62							
Mar. 4	113,29	2,38	2,26	4,71							
„ 11	92,64	2,38	2,26	4,70							
„ 18	116,42	2,37	2,26	4,63	Mar. 18	1,85	3,68	5,53	4,14	3,37	7,51
„ 25	98,94	—	—	—							

* The Wednesdays *preceding* the Saturdays.

FOREIGN EXCHANGES.—*Quotations as under,* LONDON *on Paris, Hamburg and Calcutta;—and New York, Calcutta, Hong Kong and Sydney, on* LONDON.

1	2	3	4	5	6	7	8	9
				Calcutta.				
DATES.	London on Paris. 3 m.d.	London on Hamburg. 3 m.d.	New York. 60 d. s.	Indian Council Drafts.* On demand.	Calcutta on London Credit Bills. 6 m. s.	Hong Kong. 6 m. d.	Sydney. 30 d. s.	Standard *Silver* in bars in London. pr. oz.
1876.			per. cnt.	*d.*	*d.*	*d.*	per cnt.	*d.*
an. 7	25·47½	20·69	4·84½	21⅜	21⅞	48½	—	55⅞
„ 21	25·45	20·62	4·85½	21 3/16	21¾	48½	—	55 3/16
Feb. 5	25·42	20·65	4·86	—	21½	47¾	—	54⅝
„ 26	25·42½	20·67	4·86½	—	21⅛	47⅝	—	54¼
Mar. 18	25·50	20·74	4·86½	—	20¾	47	—	54¼
„ 24	25·50	20·72	4·87	21	21⅜	46	—	52½

* In each case the India Council issued their drafts, or received tenders for them, two or three days previous to the dates in column 1.—[ED.]

ADDITIONS TO THE LIBRARY DURING THE QUARTER ENDED 30TH JUNE, 1876.

Donations.	By whom Presented.
Mesa de Estadistica General de la Republica del Uruguay. Guaderno No. 5. Defunciones, Bautismos y Matrimonos en 1874. Instruccien Publica. 85 pp., paper, 4to. Montevideo, 1876	M. Vaillant
Annuario Statistico per la Provincia di Udine. Pubblicazione dell 'Accademiæ Udinesse di Scienzie, Lettere ed Arti. Anno primo. 226 pp., paper, 8vo. Udine, 1876	—
Sul Riscatto ed escercizio delle Ferrovie Italiane. 60 pp., paper, 8vo. Roma, 1876	Ministero dei Lavori Pubblici, Roma
Lo Stato e le Ferrovie. 158 pp., paper, 8vo. Roma, 1876	,,
Progetto di Legge presentato dal Ministro dei lavori pubblici (Spaventa) di Concerto coi Ministri delle finanze e dell' estero nella tornata del 9 Marzo, 1876. 71 pp., paper, 4to. Roma, 1876	Ministero d'Agricoltura, Industria e Commercio, Roma
Rivista Internazionale, Britannica, Germania, Slava, etc. di Scienze, Lettere, Arti. Nos. 2 and 3. 64 and 96 pp., paper, 4to. Firenze, 1876	The Editor
Statistica della Provincia dei Ferrara, per Giacinto Scelsi. Prefetto. 302 pp., paper, map, 4to. Ferrara, 1875	The Author
Annuaire des Finances Russes Budget, Crédit, Commerce, Chemins de Fer. Par A. Vessélovsky. 3ième Année. 357 pp., paper, 4to. St. Petersbourg, 1875	Mons. A. Vessélovsky, St. Petersbourg
Statistisk Tabelværk. Tredie Række, ni og Tyvende Bind, indeholdende oversigter over den civile retspleje i Kongeriget Danmark. I Aarene 1871 og 1872. 151 pp., paper, 4to. Copenhagen, 1875	Bureau de Statistique du Danemark, Copenhague
Statistisk Tabelværk. Tredie Række, Tredivte Bind, indeholdende Tabeller over Kongeriget Danmarks Vare-indførsel og udførsel samt skibsfart og Brændevins. Produktion M.M. I Aaret 1874. 191 pp., paper, 4to. Copenhagen, 1876	,,
Relazioni dei Giurati Italiani sulla Esposizione Universale di Vienna del 1873. Fascicolo xix. 118 pp., paper, 8vo. Milano, 1875	Il Ministro di Agricoltura, Industria e Commercio, Roma
Monatlicher Bericht über die Resultate aus den Meteorologischen Beobachten angestellt an den Königlichen Sächsischen Stationen im Jahre 1875. 30 pp., paper, 4to. Dresden, 1876	Statitisches Bureau des Kön. Sächs. Ministeriums des Innern, Dresden
Zeitschrift des K. Sächsischen Statistischen Bureaus. Redigirt von dessen Director Dr. Victor Böhmert. xxi Jahrgang 1875. Hefte iii and iv. 163 pp., paper, 4to. Dresden, 1876	,,
Die Sterblichkeit in der Stadt Pest in den Jahren 1872-73. Und deren Ursachen von Josef Körösi. Uebersetzung aus dem Ungarischen. 2 Copies. 170 pp., paper, map, 8vo. Berlin, 1876	Josef Körösi
Die Bauthätigkeit Buda Pest's in den Jahren 1873-74. Von Josef Körösi. Uebersetzung aus dem Ungarischen. 51 pp., paper, 8vo. Berlin, 1876	,,
La France avec ses Colonies. Par E. Lavasseur. 923 pp., paper, 8vo. Paris, 1875	The Author

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Donations.	By whom Presented.
Atlas Physique, Economique, Politique de la France. Par E. Lavasseur. Planches i, vii, xiii	The Author
Annali del Ministero di Agricoltura, Industria e Commercio. Anno 1875. No. 79. Statistica. 320 pp., paper, 8vo. Roma, 1875	Il Ministero
Navigazione nel Parti del Regno. Pesca Personale e naviglio mercantile costruzioni navali infortuni marittimi. Anno 1874. 186 pp., paper, 8vo. Roma, 1875	"
Popolazione. Movimento dello Stato Civile. Anno 1874. 421 pp., paper, 8vo. Roma, 1876	"
Statistica din Romania. Movement de la population pendant l'année 1872. 89 pp., paper, 8vo. Bucharest, 1875	The Minister of the Interior
Statistica din Romania. Statistica Judiciara pe Ann, 1870. 159 pp., paper, 8vo. Bucharest, 1875	"
Statistica delle Carceri per l'Anno 1874. viii. 472 pp., paper, 4to. Roma, 1876	Ministero dell' Interno, Roma
Statistisches Jahrbuch für das Jahr 1874. Heft xi. 24 pp., paper, 8vo. Wien, 1876	K. K. Statistische Central Commission, Wien
Der Bergwerks-Betrieb Oesterreichs im Jahre 1874. II Berichtlicher Theil. Herausgegeben vom K. K. Ackerbau, Mimisterium. 349 pp., paper, 8vo. Wien, 1875	"
Jahresbericht ueber die Versvaltung des Medicinalwesen, die Krankenanstalten und die œffentlichen Gesundheitsverhaeltnisse der Stadt Frankfurt am Main. Herausgegeben von dem Aerztlichen Verein. xviii Jahrgang, 1874. 278 pp., paper, 8vo. Frankfort, 1875	Der Aerztliche Verein Frankfurt am Mani
Notizie Intorno All' ordinamento bancario e al corso forzato negli Stati Uniti di America, in Russia, nell'impero Austro-Ungarico e in Francia. Parte Prima Stati Unite e Russia. 173 pp., paper, 8vo. Roma, 1876	Il Ministro d'Agricolturu, Industria e Commercio, Roma
Methode bei jeder Art von Wahlen sowohl der Mehrheit als den Minderheiten die ihrer Stärke entsprechendre Zahl von Vertretern zu sichern. Dargestellt von Dr. phil. Gustav Burnitz und Dr. med. George Varrentrapp. 16 pp., paper. 8vo. Frankfurt, 1863	Dr. George Varrentrapp
Die Bewegung der Bevölkerung und der Witterungs, und Gesundheitszustand in Frankfurt im Jahre 1862. Von Dr. George Varrentrapp. 48 pp., paper, 8vo. Frankfurt, 1865	"
Statistische Mittheihungen ueber den Civilstand der Stadt Frankfurt am Main, im Jahre 1875. 15 pp., paper, 4to, Frankfurt, 1876	"
Preussische Statistik. Herausgegeben vom Königlichen Statistischen Bureau zu Berlin. Hefte 30, 31, 34, 35, 36. 331, 91, 90, 164, 305 pp., paper, 4to. Berlin, 1876	Dr. Engel, Berlin
Annuaire de l'Académie Royale des Sciences, des Lettres et des Beaux-Arts de Bélgique. 1875-76. 369, 354 pp., paper. Bruxelles, 1875-76	L'Académie Royale, Bruxelles
Bulletins de L'Académie Royale des Sciences, des Lettres et des Beaux-Arts de Bélgique. Vols. xxxvii and xxxviii, 1874; vols. xxxix and xl, 1875. Paper, 4to. Bruxelles, 1874-75	"

Donations—Contd.

Donations.	By whom Presented.
New Zealand. Results of the Census of 1874. Paper, folio. Wellington, 1875	Dr. J. Hector
New Zealand. Statistics of the Colony of, for 1874. Paper, folio. Wellington, 1875	”
Victoria. Statistical Register of the Colony of, for 1874. Parts 6 to 9. Folio. Victoria, 1875	The Agent-General
Proceedings of the Royal Society of Edinburgh. Paper, diagram, 8vo. Edinburgh, 1874-75	The Society
Transactions of the Royal Society of Edinburgh. Paper, plates, 4to. Edinburgh, 1874-75	”
The Banker's Magazine and Statistical Register. Edited by J. Smith Homans. 1866, July—December; 1867, January—December; 1868, February—July—November—December; 1869, January—March, September—October—December; 1870, January—September—November—December; 1871, January—December; 1872, January—October—December; 1873, February—November; 1874, January—July; 1876, May. Paper, 8vo. New York, 1866-68	The Editor
Annual Reports (56 and 57) of the Trustees of the New York State Library, 1873 and 1874. 185 and 218 pp., paper, 8vo. Albany, 1874-75	The Trustees
Annual Report of the Trustees of the Astar Library of the City of New York, 1875. 74 pp., paper, 8vo. Albany, 1876	”
Annual Report of the Canal Commissioners of the State of New York. 347 pp., board, maps, 8vo. Albany, 1875	The Commissioners
Annual Report of the Supervising Surgeon of the Marine Hospital Service of the United States for 1874. By John M. Woodworth, M.D. 256 pp., boards, 8vo. Washington, 1874	John M. Woodworth, M.D., Washington
The Cholera Epidemic of 1873 in the United States. By John M. Woodworth, M.D. 1025 pp., boards, 8vo. Washington, 1875	”
Report of the Secretary of the Treasury on the State of the Finances for the year 1875. 852 pp., boards, 8vo. Washington, 1875	David A. Wells, Norwich, Connecticut
Annual Report of the Comptroller of the Currency to the 1st Session of the 44th Congress of the United States, 6th December, 1875. 776 pp., boards, 8vo. Washington, 1875	”
Proceedings of the American Philosophical Society. Vol. xiv, June—December, 1875. 237 pp., paper, 8vo. Philadelphia, 1876	The Society
South Australian Directory, 1876. 382 pp., boards, 8vo. Adelaide, 1876	J. Boothby, Esq., Adelaide
The Journal of the Royal Agricultural Society of England. Second Series. Vol. xii, part 1, No. xxiii. 307 pp., papers, 8vo. London, 1876	The Society
The Journal of the Institute of Actuaries and Assurance Magazine. No. 101. October, 1875. 228 pp., papers, 8vo. London, 1875	The Institute
Annual Summary of Births, Deaths, and Causes of Death in London and other large Cities, 1875. 44 pp, papers, 8vo. London, 1876	The Registrar-General

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A Supplementary Report on the results of a Special Inquiry into the practice of interment in Towns. By Edwin Chadwick, Esq. 279 pp., boards, 8vo. London, 1843	J. T. Hammick, Esq.
Local Reports on the Sanitary Condition of the Labouring Population of England. 444 pp., boards, 8vo. London, 1842	"
The Census of Great Britain in 1851. By the authority of the Registrar-General. 200 pp., boards, 8vo. London, 1854	"
Report upon Uncertified Deaths in Glasgow, by the Medical Officer of Health. 84 pp., paper, 8vo. Glasgow, 1876	The Officer
Remarks by Medical Officer, for the quarter ending 31st December, 1875, and Tables. 16 pp., paper, 8vo. Glasgow, 1876	"
The Surtees Society. The York Pontifical. 390 pp., boards, 4to. Edinburgh, 1876	The Society
General Report on Public Instruction in Bengal for 1874-75. 122 pp., card, folio. Calcutta, 1875	Bengal Government
Twentieth Annual Report upon the Births, Marriages and Deaths, in the City of Providence, for the Year 1874. By Edwin M. Snow, M.D. 64 pp., paper, 8vo. Providence, 1875	Edwin M. Snow, M.D., Providence
Statistics of Friendly Societies for the Year 1874, with Introductory Report, by the Government Statist. 6 copies. 65 pp., paper, folio. Melbourne, 1875. 1 copy of above from the Agent-General	Henry H. Hayter, Esq., Melbourne
Australian Statistics, 1874. Supplementary Tables. 6 copies. Sheet, folio. Melbourne, 1875	"
Anti-Vaccination. The Statistics of the Medical Officers to the Leeds Smallpox Hospital exposed and refuted, in a letter to the Leeds Board of Guardians. By John Pickering, F.S.S., F.R.G.S. 39 pp., paper, 8vo. Leeds, 1876	The Author
Journal of the Royal United Service Institution. 156 pp., paper, 8vo. London, 1876	The Institution
The Labourer's Friend. 58 pp., paper, 8vo. London, 1876	The Editor
Reports of the Inspectors of Factories, 1875. 207 pp., paper, 8vo. London, 1876	Mr. Redgrave
Crime in England and Wales, an Historical and Critical Retrospect. By William Hoyle. 126 pp., boards, 8vo. London, 1876	The Author
Monthly Notices of Papers and Proceedings of the Royal Society of Tasmania. 147 pp., paper, 8vo. Hobarton, 1875	The Society
The Bristol Incorporated Chamber of Commerce and Shipping. Report of the Council and Proceedings at the Annual Meeting on 12th April, 1876. 61 pp., paper, 8vo. Clifton, 1876	Leonard Bruton, Bristol
Mines and Mineral Statistics of New South Wales. 252 pp., paper, maps, plans, plates, diagrams, 8vo. Sidney, 1875	Agent-General of New South Wales in London
An Abstract of the Trade of the United Kingdom for the Six Years 1869 to 1874. By Sir Henry Peek. 27 pp., paper. London, 1876	The Author

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Donations.	By whom Presented.
Journal of the Royal Asiatic Society of Great Britain and Ireland. Vol. viii, part 2. April, 1876. 308 pp., paper, 8vo. London, 1876	The Society
Twenty-first Annual Report of the Registrar-General of Scotland for 1875, and 11th Annual Report on Vaccination. 85 pp., paper, 8vo. Edinburgh, 1876....	The Registrar-General of Scotland
On the Vital Statistics of Tasmania, with especial Reference to the Mortality of Children. By E. C. Nowell, Government Statistician. 21 pp., paper, 8vo. Hobarton	The Author
Queensland. Fifteenth Annual Report from the Registrar-General on Vital Statistics. 31 pp., paper, tables, 4to. Brisbane, 1875	The Registrar-General, Brisbane
Minutes of Proceedings at Meetings of the Chemical Committee of the Royal Agricultural Society of England. 131 pp., paper, 8vo. London, 1876	The Society
Resumption and the Double Standard: A Speech delivered in the Senate of the United States, 24th April, 1876. By John P. Jones, Senator from Nevada. 170 pp., paper, 8vo. Washington, 1876	The Author
Street Pavements: A Paper read before the Liverpool Polytechnic Society, at the Royal Institution, Liverpool. By G. J. C. Dawson, M.I.C.E. 60 pp., paper, 8vo. Liverpool, 1876	—
The Mauritius Almanac and Colonial Register for 1876. 324 pp., paper, 8vo. Mauritius, 1876	Colonial Secretary, Mauritius
Army Medical Department Report for the Year 1874. Vol. xvi. 220 pp., paper, 8vo. London, 1876	The Department
Journal of the East India Association. Vol. ix, May, 1876. 288 pp., paper, 8vo. London, 1876	The Association
Quarterly Returns of the Births, Deaths, and Marriages registered in the Divisions, Counties, and Districts of Scotland. Quarter ending 31st March, 1876. 53 pp., paper, 8vo. Edinburgh, 1876	The Registrar-General, Edinburgh
Minutes of Proceedings of the Institution of Civil Engineers. Vol. xliii, 1875-76. Part 1. 452 pp., cloth, 8vo. London, 1876	The Institution
Journal of the Royal Geographical Society. Vol. xlv, 1875. 437 pp., cloth, 8vo. London, 1876	The Society
South Australia: Its History, Resources, and Productions. Edited by William Harcus, J.P. 311 pp., boards, 8vo. Adelaide, 1876	The Author
Statistical Sketch of South Australia. By J. Boothby, Esq., J.P. 66 pp., boards, 8vo. Adelaide, 1876	"
Journal of the Asiatic Society of Bengal. Vol. xliv, Nos. 198 to 200; vol. xlv, No. 201 Proceedings of the Asiatic Society of Bengal. Nos. 9 and 10	The Society
The Athenæum. Parts 579 to 581. 4to. London, 1876	The Editor
The Banker's Magazine (London). Parts 385 to 387. 8vo. London, 1876	"
Franklin Institute, Journal of the. Vol. lxxi, Nos. 3 to 5. 8vo. Philadelphia, 1876	The Institute
Royal Geographical Society, Proceedings of. Vol. xx, No. 3. 8vo. London, 1876	The Society

Donations—Contd.

Donations.	By whom Presented.
Institution of Surveyors, Transactions of the. Vol. viii, Parts 8 to 10. 8vo. London, 1876	The Institution
Medical and Chirurgical Society, Proceedings of the. Part 42, vol. viii, No. 1. 8vo. London, 1876	The Society
Returns of Births, Deaths, and Marriages for Scotland, monthly and weekly current numbers	Registrar-General, Scotland
National Association for the Promotion of Social Science, Sessional Proceedings of the. Vol. ix, Nos. 7 to 15	The Association
Trade and Navigation Accounts, February, March, April, and May, 1876	Board of Trade
Arts, Journal of the Society of. Current numbers	The Editor
Dublin, Returns of Births, Deaths, and Marriages. Current numbers	Registrar - General of Ireland
Insurance Record (current numbers)	The Editor
Nature (current numbers)	"
Supplemento alla Meteorologia Italiana, Anno 1875. Fascicolo II. 154 pp., paper, diagrams, tables. 8vo. Roma, 1876	Il Ministero di Agricultura, Industria e Commercio, Roma
Relazione al Consiglio de Agricoltura nell'adunanza del 1°. Maggio, 1876. 49 pp., paper. 8vo. Roma, 1876	"
Mittheilungen des Statistischen Bureaus der Stadt Leipzig. 10tes Heft. Herausgegeben von Ernst Hasse. 16 pp., paper, 4to. Leipzig	Das Statistisches Bureau zu Leipzig
Programma dello Archivio di Statistica lettera di Cesare Correnti. 19 pp., paper. 8vo. Roma	Il Ministero di Agricultura, Industria e Commercio, Roma
Della Emigrazione e delle sue leggi, per V. Ellena. 68 pp., paper. 8vo. Roma	"
Italy. Bollettino Settiminale dei Prezzi di Alcuni dei Principali Pro dotti Agrari. No. 19	"
Bollettino delle Situazione Meusili dei Conti. No. 2 (February)	"
Meteorologia Italiana. No. 12 (April). 1876	"
Revue Bibliographique Universelle. Partie Littéraire, vol. xvi, Nos. 3 and 5. Partie Technique, vol. xviii, Nos. 3 and 5	The Editor
Rassegna Settimanale delle Movimento delle Popolazione e delle Stato Civile Communi di Firenze (current numbers)	La Giunta di Statistica del Commune di Firenze

Purchased.

Journal des Economistes. Nos. 123 and 124 of vol. xli.

Annales d'Hygiène Publique. Nos. 92 and 93, vol. xlv.

The Economist (current weekly numbers).

Investors' Monthly Manual (current monthly numbers).

The Annual Register for 1875.

The Statesman's Year Book for 1876.

The British Almanac and Companion for 1876.

Vol. XXXIX.] [Part III.

JOURNAL OF THE STATISTICAL SOCIETY,

SEPTEMBER, 1876.

REPORT *of the* COUNCIL *for the* FINANCIAL YEAR *ended* 31*st December*, 1875, *and for the* SESSIONAL YEAR *ended* 27*th June*, 1876, *presented at the* FORTY-SECOND ANNIVERSARY MEETING *of the* STATISTICAL SOCIETY, *held at the Society's Rooms, Somerset House Terrace (King's College Entrance), Strand, W.C., London, on the* 27*th of June*, 1876, *with the* PROCEEDINGS *of that Meeting.*

JAMES HEYWOOD, ESQ., *President, in the Chair.*

THE SECRETARY read the circular convening the meeting.

The minutes of the last ordinary meeting were read and confirmed.

The following report was then read:—

Report of the Council.

The Society is now in the forty-second year of its existence, and fully maintains its position as a scientific body.

In the past year the changes in the *personnel* of the Society are exhibited in the subjoined table as compared with the average of the previous ten years:—

Particulars.	1875.	Average during the Last Ten Years.
Number of Fellows on 31st December	607	429
Life Members included in the above	87	68
Number lost by death, withdrawal or default	31	24
New Fellows elected	50	46

These figures show that the Society continues to advance in public estimation, although it has not yet succeeded in attracting to it the large numbers who have joined some other scientific associations. This is perhaps inseparable from the nature of its pursuits, and may in some degree be due to the large amount of statistical information afforded by the various departments of the Government, and the still imperfect appreciation by the public of the necessity of submitting the information so collected to the scientific methods and skilled criticism, which it is a leading object of this Society to bring to bear upon them.

The financial state of the Society, treated in the same manner, shows the following result:—

Particulars.	1875.	Average of Last Ten Years.
	£	£
Balance at beginning of year	262	253
Receipts from all sources	1,293	963
Cash balance at end of year	94	262
Surplus of assets over liabilities	2,135	2,065

These figures show that the resources of the Society have fairly kept pace with the increase in its numbers. The smallness of the balance in hand at the end of the year 1875 was due to the exceptional expenditure entailed by the removal of the Society from St. James's Square, the greater part of which expenditure was defrayed out of the receipts of the year, supplemented by the sale of stock, of which the particulars are given in the (1) "Abstract "of Receipts and Payments," appended.

The Inaugural Address of the President was given on the reassembling of the Society in November, and the papers read and the members elected at each of the monthly meetings are recorded below.

SESSION 1875-76.

First Ordinary Meeting, Tuesday, 16*th November*, 1875.

The President, JAMES HEYWOOD, Esq., F.R.S., in the Chair.

The following were elected Fellows:—

H. Sidney Everett, M.A.
Handel Cossham, F.G.S.
Samuel Edwards.
Owen FitzGeorge.
John F. Whall, M.A.
Rev. Isaac Doxsey.
Thos. Barclay, Ph.D.

F. J. Faraday.
John A. Baynes.
Henry Letheby, M.B.
J. M. Granville.
H. M. Macpherson, F.R.C.S.
E. K. Fordham, J.P.
Arthur Pearson.

(*a*) The President read his "Inaugural Address," and presented the Howard Medal, awarded by the Council, to

EDWARD SMITH, Esq., F.S.S.,

for his Essay on "the State of the Dwellings of the Poor in the "Rural Districts of England, with special regard to the Improve-"ments that have taken place since the middle of the Eighteenth

"Century, and their Influence on the Health and Morals of the "Inmates."

(*b*) Mr. E. G. Ravenstein read a Paper "On some Statistics "Collected at the Geographical Congress at Paris in July, 1875," which he attended as a delegate from this Society.

(*c*) Dr. Guy, F.R.S., read a Paper on "John Howard's True "Place in History," a Supplement to his Paper, "John Howard as "Statist."

Second Ordinary Meeting, Tuesday, 21*st December,* 1875.

The President, JAMES HEYWOOD, Esq., F.R.S., in the Chair.

The following were elected Fellows:—

F. E. M. Beardsall.
Colonel J. C. Haughton, C.S.I.
W. Morris Beaufort.
David Cunningham, C.E.
C. D. Higham, F.I.A.
Wm. Shelford, C.E.
Joseph Allen.

Mr. John Dun, the General Manager of Parr's Banking Company, Limited, of Warrington, read a Paper on "The Banking "Institutions, Bullion Reserves, and Non-Legal Tender Note Circu- "lation of the United Kingdom, Statistically Investigated."

Third Ordinary Meeting, Tuesday, 18*th January,* 1876.

The President, JAMES HEYWOOD, Esq., F.R.S., in the Chair.

The following were elected Fellows:—

James Lord.
John W. Williams.
James R. Carphin.
Geo. Tomkins.

Mr. Robert Baxter read a Paper "On the Principles which "Regulate the Rate of Interest and on the Currency Laws."

Fourth Ordinary Meeting, Tuesday, 15*th February,* 1876.

The President, JAMES HEYWOOD, Esq., F.R.S., in the Chair.

The following were elected Fellows:—

Luke Hansard.
William Westgarth.
Hon. Howard Spensley.
Robert Baxter.
Leonard Bruton.
Alfred T. Hawkins.
Joseph Freeman.
John T. R. Allen.
Edward A. Hall.

(*a*) A Paper, by Sir Charles W. Dilke, Bart., M.P., was read "On the Municipal Government of Paris."

(*b*) Dr. Mouat, F.R.C.S., read a Paper "On International "Prison Statistics."

Fifth Ordinary Meeting, Tuesday, 21*st March,* 1876.

The President, James Heywood, Esq., F.R.S., in the Chair.

The following were elected Fellows:—

John Whitcher.
Thomas Salt, M.P.
William Hoyle.

The undermentioned were elected Honorary Members:—

John Langton, Esq., of Ottawa, Dominion of Canada.
James Hector, Esq., M.D., F.R.S., &c., of Wellington, New Zealand.
E. C. Nowell, Esq., Government Statistician, of Hobarton, Tasmania.
E. G. Ward, Esq., Registrar-General, of Adelaide, New South Wales.
Professor F. A. Walker, M.A., of Yale College, Newhaven, Connecticut, United States of America.
His Honour Sir Redmond Barry, Knight, Judge Supreme Court of Melbourne, Victoria.

A Paper, by Mr. H. S. Skeats, was read, on "Statistics Relating "to the Support of Religious Institutions in England and Wales."

Sixth Ordinary Meeting, Tuesday, 18*th April,* 1876.

The President, James Heywood, Esq., F.R.S., in the Chair.

The following were elected Fellows:—

Edward Bartleet.
J. B. St. C. Crosse.
Henry Fearnside.
B. E. Brodhurst.

Mr. Harry Chubb read a Paper on the "Gas Supply of the "Metropolis."

Seventh Ordinary Meeting, Tuesday, 16*th May,* 1876.

W. G. Lumley, Esq., Q.C., a Vice-President, in the Chair.

The following were elected Fellows:—

Josiah Oake Adams, F.R.C.S.
Alfred Ashby, M.B., F.R.C.S.
Israel Abrahams, F.R.G.S.
John Hilton, F.R.S., &c.

Dr. Farr, F.R.S., read a Paper "On the Valuation of Railways, "Mines, Telegraphs, and other Commercial Concerns, with Pro-"spective, Deferred, Increasing, Decreasing, or Terminating Profits."

Eighth Ordinary Meeting, Tuesday, 20*th June,* 1876.

The President, James Heywood, Esq., F.R.S., in the Chair.

The following were elected Fellows:—

Robert Vigers.
John Lornie.

The Right Hon. J. Stansfeld, M.P., read a Paper "On the

"Validity of the Annual Government Statistics of the Operation "of the Contagious Diseases Acts."

The Society was duly represented by delegates at the meetings of the British Association, at Bristol; the Social Science Association, at Brighton; and the International Congress of Geographical Science, in Paris, in the proceedings of all of which they took part.

The Howard Medal for 1875 was awarded to Mr. Edward Smith, a Fellow of the Society, whose excellent essay has been published in a separate form.*

The subject of the Essay for the present year is "*On the* "*Mortality of Hospitals (General and Special) in the United King-* "*dom in Times Past and Present.*"

The President of the Society has liberally added the sum of 20*l.* to be presented with the medal in November next.

The subject of the Essay for the Howard Medal of 1877 is— "*On the Condition and Management—Past and Present—of the* "*Workhouses and similar Pauper Institutions in England and Wales,* "*and their Effect on the Health, Intelligence, and Morals of the* "*Inmates.*"

The Council, under the provisions of Rule 7, have elected as Honorary Members of the Society, the actual Presidents of the Statistical Societies of Paris, Dublin, Manchester, and Frankfort.

The Building Fund, referred to in the last annual report, now amounts to 128*l.* 8*s.*, which has been invested in 3½ per cent. Consolidated Metropolitan Stock.

The Library continues to receive valuable additions, chiefly by gift. It is being arranged, and the catalogue brought up to date, so as to render it easily accessible for purposes of study and reference.

The losses by death during the year have been heavy in Fellows eminent in literature and science. Chief among them were Earl Stanhope, who occupied a distinguished position as a scholar, an antiquary, and a man of high culture generally; Mr. Samuel Redgrave, an original member of the Society, who communicated an interesting paper on "Criminal Statistics" to the first number of the *Journal;* the Rev. Robert Everest, who contributed to the *Journal* several important essays on various subjects; Dr. Letheby, who had only recently joined the Society, but was well known and highly esteemed in the branch of science which he taught and practised; and the Right Hon. Holt Mackenzie, a distinguished Indian administrator, who was an original member of the Society. Detailed notices of these, and of the other members who died during the year, properly belong to the institutions with the pursuits of which they were more immediately identified.

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* "The Peasant's Home," 1760-1875. Published by E. Stanford, 55, Charing Cross, London.

In the "Report" for 1864-65, the Council of that time printed a list of the papers read and published during the ten preceding years, showing the great extent of the labours of the Society, and indicating interesting subjects of inquiry for future investigation. The Council consider it desirable to adopt a similar course in the present year, and to enumerate the papers read in the time which has since elapsed, arranged in the same manner and classified under the same heads as in the "Report" above referred to.

From this list, which is subjoined, it will be seen that there are few branches of statistical inquiry which have not been considered by the Society. Among the papers are some contributions of great value and of permanent interest. In the Miscellanea of the *Journal* are also periodical collections of statistical tables of considerable interest. They are too numerous to detail. They add greatly to the value and interest of the labours of the Society.

a. Commercial Statistics.

On the Commercial Progress of the Colonies and Dependencies of the United Kingdom	E. T. Blakely	1865
On the Progress of the Small Arms Manufacture	J. D. Goodman	,,
Railway Extension and its Results	R. D. Baxter	1866
On the Trade with the Coloured Races of Africa	Archibald Hamilton	1868
On Joint Stock Companies..	Leone Levi	1870
On Wool Supply	Archibald Hamilton	,,
The Official Trade and Navigation Statistics	Stephen Bourne	1872
Tonnage Statistics of the Decade 1860-1870	John Glover	,,
On the Consumption of Tobacco in the United Kingdom, 1801-70	William E. A. Axon	,,
Some Statistics relating to the Traffic through the Suez Canal; to Merchant Vessels touching at St. Helena; and to Losses posted on "Lloyd's Loss Book"......................................	Henry Jeula	,,
The Progress of our Foreign Trade, Imports and Exports, during the past Twenty Years	Stephen Bourne	1875
On the Valuation of Railways, Canals, Telegraphs, and other Commercial Concerns, with Prospective, Deferred, Increasing, Decreasing, or Terminating Profits	William Farr, M. D., F. R. S.	1876

b. Industrial Statistics.

The Lace and Hosiery Trades of Nottingham........	William Felkin	1866
On Strikes and Combinations with reference to Wages and the Conditions of Labour	Jacob Waley, M.A.	1867
On Arbitration in the Hosiery Trades of the Midland Counties	E. Renals	,,
On the Agricultural Statistics of the United Kingdom	James Caird	1868
On the Rise, Progress, and Future Prospects of Tea Cultivation in British India	C. Henry Fielder	1869

b. INDUSTRIAL STATISTICS—*Contd.*

On the Agricultural Statistics of the United Kingdom. Second Paper	James Caird	1869
On the Decline of Shipbuilding on the Thames	John Glover	,,
The Cotton Trade of the United Kingdom during the Seven Years 1862-68, as compared with the Seven Years 1855-61; with Remarks on the Return of Factories existing in 1868	Elijah Helm	,,
The Influence of Price upon the Cultivation and Consumption of Cotton during the Ten Years 1860-70	William B. Forwood	1870

c. FINANCIAL STATISTICS.

On the Statistical and Fiscal Definitions of the word Income	Rev. J. E. T. Rogers, M.A.	1865
On the variation of Prices and the value of Currency since 1782	W. S. Jevons, M.A.	,,
On the County Clearing	Sir John Lubbock, Bart.	,,
On the Municipal Expenditure of the Borough of Birmingham	Thomas Avery	1866
On the frequent Autumnal Pressure in the Money Market, and the Action of the Bank of England	W. S. Jevons, M.A.	,,
On the Budgets and Accounts of England and France	Major-Gen. Geo. Balfour, C.B.	,,
Free Trade in Banking	Colonel Sykes, M.P.	1867
On the Finances of the United States of America, 1861-67	L. H. Courtney	1868
On the Condition of the Metallic Currency of the United Kingdom, with reference to the Question of International Coinage	W. Stanley Jevons, M.A.	,,
On the Cost and Organisation of the Civil Service	Horace Mann	1869
The Pressure of Taxation on Real Property	Frederick Purdy	,,
On International Coinage and the Variations of the Foreign Exchanges during Recent Years	Ernest Seyd	1870
Finance of the Free Church of Scotland	Rev. Dr. Robert Buchanan	,,
On the Incidence of Local Taxation	Rev. J. E. T. Rogers, M.A.	,,
On our Home Monetary Drains, and the Crisis of 1866	R. H. Patterson	,,
On the Rate of Interest, and the Effects of a High Bank-Rate during Commercial and Monetary Crises	,,	1871
On the Local Taxation of Great Britain and Ireland (Tayler Prize Essay)	R. H. I. Palgrave	,,
On Local Taxation (Second Tayler Prize Essay)	John Scott	,,
The Bank Act and the Crisis of 1866	Hammond Chubb, B.A.	1872
Statistical Critique on the Operation of the Bank Charter Act of 1844, and Suggestions for an Improved System of Issue	Ernest Seyd	,,
Notes on Banking in Great Britain and Ireland, Sweden, Denmark, and Hamburg; with some remarks on the Amount of Bills in Circulation, both Inland and Foreign, in Great Britain and Ireland; and the Banking Law of Sweden	R. H. I. Palgrave	1873

c. Financial Statistics—*Contd.*

On our National Parliamentary Accounts, with Suggestions for establishing a Doomsday Book, giving the Value of National Government Property or Assets as the Basis of a sound System of Accounts, by which Expenditure for Capital and Current Account shall be separately shown	Frank P. Fellows	1873
Suggestions for a Government Loan by Means of a new Form of Security to be termed "Accumulative Bonds"	Sir Henry Barron, Bart.	„
On the Relation of the Banking Reserve of the Bank of England to the Current Rate of Interest, with an Inquiry into some of the Causes which have led to the Higher Rates charged in Recent Years	R. H. I. Palgrave	„
The Recent Progress of National Debts	R. D. Baxter, M.A.	„
Statistics of Austral-asian Banking	Nathaniel Cork	1874
On the Reconstruction of the Property and Income Tax	Leone Levi, LL.D.	„
On the Principles which regulāte the Rate of Interest, and on the Currency Laws	Robert Baxter	1876
The Banking Institutions, Bullion Reserves, and Non-Legal Tender Note Circulation of the United Kingdom, Statistically Investigated	John Dun	„

d. Moral and Social Statistics.

On the Extension of Modern Subjects as parts of Regular Study in Educational Institutions	James Heywood, M.A., F.R.S.	1865
On Public Schools and the Civil Service of India	Horace Mann	„
On the Economic Condition of the Highlands and Islands of Scotland	Leone Levi	„
On the Statistics of Crime in Birmingham as Compared with other Large Towns	J. Thackray Bunce	„
On the Economic Condition of the Highlands of Scotland	Duke of Argyll, K.T.	1866
On Prison Discipline and Statistics in Lower Bengal	F. J. Mouat, M.D.	1867
On the Progress of Elementary Education	William L. Sargant	„
On the Judicial Statistics of England and Wales, with Special Reference to the Recent Returns relating to Crime	James T. Hammick	„
On the Statistics of Civil Procedure in English Courts of Law	William John Bovill	„
On Public Instruction in Turkey	Hyde Clarke, D.C.L.	„
Statistics of Sums given by Native Gentry in India for Charitable and Educational Institutions and for Works of Public Utility	Colonel Sykes, M.P.	„
On the Funds available for developing the Machinery of Education in England	Rev. J. E. T. Rogers, M.A.	„
Form of Government and Educational System of the University of Cambridge	James Heywood, M.A., F.R.S.	1868
The Increase of Material Prosperity and of Moral Agents Compared with the State of Crime and Pauperism	J. H. Elliott	„
State of Health and of the Employment of Indians in the New England Company's Settlement of Kanyageh, Canada	James Heywood, M.A., F.R.S.	„

d. MORAL AND SOCIAL STATISTICS—*Contd.*

Statistical Notes regarding the Colony of Natal	Dr. Mann, F.R.G.S.	1869
On Insanity and Crime, and on the Plea of Insanity in Criminal Cases	William A. Guy, M.B., F.R.S.	,,
On the Economic Progress of New Zealand	Archibald Hamilton	,,
On the House Accommodation of England and Wales with reference to the Census of 1871	R. H. I. Palgrave	,,
On Mechanics' Institutions and the Elementary Education Bill	E. Renals	,,
On the Aptitude of North American Indians for Agriculture	James Heywood, M.A.	,,
Statistical Results of the Contagious Diseases Acts	Berkeley Hill, M.B.	,,
On Currency Laws and their Effects on Pauperism	Ernest Seyd	1871
On the Geographical Distribution of Intellectual Qualities in England	Hyde Clarke, D.C.L.	,,
Comparative Health of Seamen and Soldiers, as shown by the Naval and Military Statistical Reports	T. Graham Balfour, M.D.	1872
On Prison Discipline and Statistics in Lower Bengal	F. J. Mouat, M.D.	,,
The Statistics of Legislation	Frederick H. Janson	1873
High Price of Coal: Suggestions for Neutralising its Evils	Sir Rowland Hill, K.C.B.	,,
Some Statistics of the Courts of Justice and of Legal Procedure in England	F. H. Janson	1874
On Improved Dwellings and their Beneficial Effect on Health and Morals, with Suggestions for their Extension	Charles Gatliff	1875
Marriages between First Cousins in England and their Effects	G. H. Darwin, M.A.	,,
Friendly Societies and Similar Institutions	E. W. Brabrook	,,
On the Executions for Murder that have taken place in England and Wales during the last Seventy Years	W. A. Guy, M.B., F.R.S.	,,
Municipal Government of Paris	Sir Charles Dilke, Bart., M.P.	1876
International Prison Statistics	F. J. Mouat, M.D.	,,
On Statistics relating to the Support of Religious Institutions in England and Wales	H. S. Skeats	,,
On the Validity of the Annual Government Statistics of the Operation of the Contagious Diseases Acts	Rt. Hon. James Stansfeld, M.P.	,,

e. POLITICAL STATISTICS.

Organisation, Strength, and Cost of the English and French Navies in 1865	Col. W. H. Sykes, M.P.	1866
On the Military Conscription of France	Major-Gen. Geo. Balfour, C.B.	1867
Analysis of the Report upon the State of the Empire of France presented to the Senate and Legislative Body, February, 1867	Colonel Sykes, M.P.	1868
Statistics of the Kingdom of Greece	Demétrius Bikélas	,,
Some Statistics relating to the Civil Service	Horace Mann	,,
On the Statistics of the Kingdom of the Netherlands	Samuel Brown	1869
On the Colonies	Archibald Hamilton	1872
Summary of Statistics of the Russian Empire	Robert Michell	,,

e. POLITICAL STATISTICS—*Contd.*

Notes on the Purchase of the Railways by the State	R. B. Martin, M.A.	1873
The Elections of 1868 and 1874	J. Biddulph Martin	1874
Local Government among different Nations	Sir Charles W. Dilke, Bart. M.P.	,,
The Mathematical Theory of Political Economy	W. Stanley Jevons, M.A.	,,
The Future of the United States	George W. Norman	1875
The Mercantile Navies of the World in the years 1870 and 1874 compared	Henry Jeula	,,

f. VITAL STATISTICS.

Inconsistencies of the English Census of 1861, with the Registrar-General's Reports: and Deficiencies in the Local Registry of Births	William Lucas Sargant	1865
On Infant Mortality, and on alleged Inaccuracies of the Census (Part I)	William Farr, M.D., F.R.S.	,,
On the supposed Extinction of the Turks and Increase of the Christians in Turkey	Hyde Clarke, D.C.L.	,,
Mortality of Children in the Principal States of Europe	Wm. Farr, M.D., F.R.S.	1866
On the Vital Statistics of Birmingham and Seven other large Towns	W. L. Sargant	,,
Observations on French Population Statistics, particularly those of Births, Deaths, and Marriages	T. A. Welton	,,
On the Unequal Proportion between the Male and Female Population of some Manufacturing and other Towns	Rev. A. W. Worthington, B.A.	1867
On the Mortality of London Hospitals: and Incidentally on the Deaths in the Prisons and Public Institutions of the Metropolis	William A. Guy, M.B., F.R.S.	,,
On the Comparative Population of European States	Samuel Brown	1868
On the Classification of the People by Occupations, and on other subjects connected with Population Statistics of England	T. A. Welton	1869
The Relative Supplies from Town and Country Families to the Population of Future Generations	Francis Galton, F.R.S.	1873
The Census of Bengal	Henry Beverley	1874
The Value of Death-Rates as a test of Sanitary Condition	N. A. Humphreys	,,
The Effect of Migrations upon Death-Rates	Thomas A. Welton	1875

g. MISCELLANEOUS STATISTICS.

On the Original and Acquired Meaning of the term "Statistics," and on the proper Functions of a Statistical Society; also on the Question whether there be a Science of Statistics; and if so, what are its Nature and Objects, and what is its Relation to Political Economy and "Social Science"	W. A. Guy, M.B., F.R.S.	1865
On the Benefit Building and Freehold Land Societies of Edinburgh	G. J. Johnson	,,
On the Statistical Progress of the Kingdom of Italy	Samuel Brown	,,
A notice of Professor Roger's History of Agriculture and Prices in England, 1259-1400	W. Newmarch, F.R.S.	,,
Central Statistical Commission of Austria; Analysis of Report for 1866	W. T. Newmarch	1867

g. MISCELLANEOUS STATISTICS—*Contd.*

Report on the Sixth International Statistical Congress, held at Florence from 29th September to 5th October, 1867	Samuel Brown	1868
Cattle Plague in Norfolk	William Smith, M.R.C.V.S.	,,
The present Aspect of Statistical Inquiry in relation to Shipping Casualties	H. Jeula, F.R.G.S.	,,
Inaugural Address on the Progress and Present Condition of Statistical Inquiry	W. Newmarch, F.R.S.	1869
Report on the Seventh International Statistical Congress, held at the Hague, 6th—11th September, 1869	Samuel Brown	,,
Statistical Notes on the Free Town-Libraries of Great Britain and the Continent	William E. A. Axon	1870
On the Claims of Science to Public Recognition and Support; with special Reference to the so-called Social Sciences	William A. Guy, M.B., F.R.S.	,,
Suggestions upon the Preparation and Printing of Parliamentary Statistics	Frederick Purdy	1871
The President's Inaugural Address, Session 1871-72	W. Farr, M.D., F.R.S.	,,
Suggestions for the Collection and Arrangement of Local Statistical Information	J. T. Hammick	,,
On the Limits of Legislative Interference with the Sale of Fermented Liquors	Leone Levi, LL.D.	1872
Statistics of Telegraphy	Sir James Anderson	,,
The President's Inaugural Address, Session 1872-73	W. Farr, M.D., F.R.S.	,,
Report on the Eighth International Statistical Congress held at St. Petersburg, $\frac{22}{10}$th to $\frac{29}{17}$th August, 1872	Samuel Brown	,,
John Howard as Statist	William A. Guy, M.B., F.R.S.	1873
An Attempt to answer the Question, Why it is that so much Land is occupied and cultivated by its owners in France and some other European Countries on the Continent and so little in England?	George W. Norman	,,
The President's Inaugural Address, Session 1873-74	W. A. Guy, M.B., F.R.S.	,,
Statistics of Deaths by Suicide among Her Majesty's British Troops serving at Home and Abroad during the ten years 1862-71	W. H. Millar	1874
The Co-operative Land Movement	E. W. Brabrook	,,
The President's Inaugural Address, Session 1874-75	W. A. Guy, M.B., F.R.S.	,,
The Consumption of Intoxicating Liquors at various periods as affected by the Rates of Duty imposed upon them	Rev. D. Burns, M.A.	1875
The President's Inaugural Address, Session 1875-76	James Heywood, M.A., F.R.S.	,,
Statistics at the Paris Geographical Congress	E. G. Ravenstein	,,
John Howard's True place in History. A Supplement to the Paper entitled "John Howard as Statist"	W. A. Guy, M.B., F.R.S.	,,
Statistics relating to the Colony of Victoria, Australia	William E. Stark	,,
The Gas Supply of the Metropolis	Harry Chubb	1876

The following list of Fellows proposed as Officers and Council of the Society for the Session 1876-77, is submitted for the consideration of the meeting :—

COUNCIL AND OFFICERS FOR 1876-77.

PRESIDENT.

JAMES HEYWOOD, ESQ., M.A., F.R.S.

COUNCIL.

*Robert Baxter.
*The Right Hon. Lord Borthwick.
*Stephen Bourne.
Hammond Chubb, B.A.
Hyde Clarke, D.C.L.
*John Cleghorn.
Right Hon. Earl Fortescue.
Francis Galton, F.R.S.
*Robert Giffen.
Archibald Hamilton.
James Thomas Hammick.
Frederick Hendriks.
Frederick H. Janson, F.L.S.
Henry Jeula, F.R.G.S.
Francis Jourdan.
H. Reader Lack.
Professor Leone Levi, LL.D.
William Golden Lumley, Q.C., LL.M.
Richard Biddulph Martin, M.A.
Frederic John Mouat, M.D.
William T. Newmarch.
Robert H. Patterson.
Henry Davis Pochin.
Frederick Purdy.
Ernest George Ravenstein.
*Sir Rawson William Rawson, C.B., K.C.M.G.
Alexander Redgrave.
Ernest Seyd.
Thomas Sopwith, M.A., F.R.S.
William Tayler, F.S.A.

Those marked * are new Members.

TREASURER.

Richard Biddulph Martin, M.A.

SECRETARIES.

H. Reader Lack. | Hammond Chubb, B.A.
Robert Giffen.

FOREIGN SECRETARY.

Frederic J. Mouat, M.D.

The abstract of receipts and expenditure, and the balance sheet of assets and liabilities to the 31st of December, 1875, are subjoined together with the Auditors' report for the same year.

(I.)—Abstract *of* Receipts *and* Payments, Year *ended* 31*st* December, 1875.

RECEIPTS.		£	s.	d.
Balance in Bank, 31st December, 1874	£40 16 –			
Balance of Petty Cash	12 18 1			
Balance of Advertisement Cash ...	7 18 4			
		61	12	5
Dividends on Stock......................		47	12	–
Subscriptions:—				
23 Arrears	£48 6 –			
417 for 1875	875 14 –			
2 in Advance......	4 4 –			
		928	4	–
Compositions (5)		105	–	–
Journal and Almanac Sales	£122 19 2			
Journal, by sale of surplus copies of	10 1 6			
Journal by Advertisements	17 11 9			
		150	12	5
		1,293	–	10
*Extraordinary Items**				
By Deposit and Interest, per Treasurer	£203 16 –			
By the sale of 328*l.* 15*s.* 4*d.* Consols	310 13 8			
By Mr. Heywood a Gratuity with Howard Medal of 1876	20 – –			
		534	9	8
		£1,827	10	6

PAYMENTS.		£	s.	d.
Rent		95	–	–
Salaries, Wages, and Pension		325	9	6
Journal, Printing	£417 11 6			
,, Indexes	10 10 –			
,, Shorthand Reporting	16 16 –			
,, Literary Services	4 4 –			
		449	1	6
Advertising		41	7	3
Ordinary Meeting Expenses		30	–	9
Library		17	9	11
Stationery and Sundry Printing ...		130	15	–
Postage, &c.		56	1	–
Fire and Lights		19	6	5
Incidental Expenses		43	11	1½
Furniture and Repairs		491	5	5
Quetelet Memorial Fund, Belgium		10	–	–
Howard Medal		–	5	–
Anniversary Dinner		22	10	6
Statistical Dinner Club		1	5	5
		£1,733	8	9½
Balance at Messrs. Drummond's (net)	£74 – 9			
Balance of Petty Cash	8 9 10½			
Balance of Advertisement Cash ...	11 11 1			
		94	1	8½
		£1,827	10	6

* Referred to in the Auditors' report.

(II.)—Balance Sheet *of* Assets *and* Liabilities *on* 31*st* December, 1875.

LIABILITIES.	£	s.	d.	£	s.	d.
Accounts for—						
December number of *Journal* and Almanac for 1876	158	3	9			
Stationery and Printing	13	7	6			
Bookbinding	32	9	7			
Fire and Lights	2	6	9			
Miscellaneous	10	–	–			
				216	7	7
Balance in favour of the Society...				2,135	1	2½
				£2,351	8	9½

ASSETS.		£	s.	d.
Cash Balances		94	1	8½
Stock:—				
New 3 per Cent. Consols (1,271*l.* 4*s.* 8*d.*), cost		1,207	7	1
Property (Estimated Value):—†				
Books in Library	£500			
Journals in Stock	300			
Furniture and Fixtures ...	200			
		1,000	–	–
Arrears of Subscriptions recoverable (say)		50	–	–
		£2,351	8	9½

† The Auditors recommend that the Executive Committee revalue these items during the present year.

"*Auditors' Report*, 1875.

"STATISTICAL SOCIETY,
"SOMERSET HOUSE TERRACE (KING'S COLLEGE ENTRANCE),
"STRAND, W.C., LONDON,
"*7th April*, 1876.

"The Auditors appointed to examine the Accounts of the Society, herewith

"REPORT:—

"That they have carefully compared the Entries in the Books with the several *Vouchers* for the same, from the 1st January to the 31st December, 1875, and find them correct, showing the *Receipts* (including a Balance of 61*l.* 12*s.* 5*d.* from 1874) to have been 1,827*l.* 10*s.* 6*d.*, and the *Payments* 1,733*l.* 8*s.* 9½*d.*, leaving a Balance in favour of the Society of 94*l.* 1*s.* 8½*d.* The receipts include three extraordinary items, amounting to 534*l.* 9*s.* 8*d.*, as shown in the preceding Abstract of Receipts and Payments.

"They have also had laid before them an estimate of the *Assets* and *Liabilities* of the Society, the *former* amounting to 2,351*l.* 8*s.* 9½*d.*, and the *latter* to 216*l.* 7*s.* 7*d.*,—leaving a Balance in favour of the Society of 2,135*l.* 1*s.* 2½*d.*

"They further find that at the end of the year 1874 the number of Fellows on the list was 588, which number was diminished in the course of the year to the extent of 31 by Deaths, Resignations, and Defaulters, and that 50 new Members were elected, leaving on the list, on 31st December, 1875, 607 Fellows of the Society.

(Signed) "WILLIAM TAYLER,
"CORNELIUS WALFORD,
"J. B. BROWN, } *Auditors.*

"MEMORANDUM.

"The Auditors draw attention to the fact, by way of explanation of the reduction of the investments, that a sum of about 800*l.* has been expended in relation to the moving into the new house, and providing accommodation for the books, &c., during the years 1874 and 1875."

The President moved "That the Report of the Council, the Abstract of Receipts and Payments, the Balance Sheet of Assets and Liabilities, and the Auditors' Report for 1875, be received and adopted, entered on the minutes, and printed in the *Journal.*"

Dr. Guy seconded the motion.

Mr. J. B. Brown pointed out the uncertainty of the tenure of their present quarters by the Society, their liability to be removed at any minute, and the necessity for taking timely measures to secure a permanent abode for this and other similar societies. He mentioned the probable cause of the failure to secure this end on a former occasion, and suggested the formation of a committee of the presidents and other officers of the different societies concerned to take the matter into careful consideration, to secure a site, and to mature a plan for timely adoption.

The President thought they were in no immediate danger; that to find a suitable site was a most difficult matter; and that the exclusion of the Society from Burlington House, where so many other societies had been accommodated, was unaccountable. He hoped that better times were at hand, and that the Statistical Society would be able to manage very well in their present excellent quarters until the real need for a change arose.

Dr. Guy said that the Statistical Society had done its part in trying to bring about the union of the societies, and that the movement had not failed in consequence of the Statistical Society lacking in any effort to raise the necessary funds, but because the other societies fell off one by one when the question came to be seriously taken in hand. From his experience in the matter he could not encourage any one to expect that the work could be done by any union of societies. The most likely way was through the eccentricity of some private person. There were in England many people overwhelmed with wealth, and one of them might perhaps feel disposed to build a home for the societies, and let it to them at a small rental. The London squares were at present somewhat ingloriously misused, for instance—Euston Square, which, by some strange mistake or false step of the inhabitants, was now a perfect desert. He did not see why the people living in some of these squares should not say, "This enclosure is an incumbrance to us: our wives and children do not use it: you shall put up a handsome building in it if in lieu of rent, you will keep the garden in order." That might seem rather a wild notion, but he for one after the experience he had had in this matter, would not undertake to co-operate with any group of societies to bring about this common object. He felt certain it would never be accomplished in that way. Of course it was well known that their tenure of their present rooms was uncertain; but the Council of King's College were not unreasonable men, and perhaps might be persuaded for a liberal consideration to grant the Society a perpetual tenure.

Dr. Farr said there was a building fund of some 128*l.*, and if the Fellows of the Society would mention the existence of that fund and try to increase it, so that they might be in a position to take advantage of circumstances as they arose, they would be doing great good.

The resolution was unanimously agreed to.

The President said the next business was the alteration of Rule XII.

Dr. Mouat said the object of the alteration was to enable the Council to appoint a foreign secretary, who need not be one of the general secretaries. The alteration proposed was to omit the word "and" in the ninth line, and the words "one of whom" in the tenth line; and in the eleventh line to insert the words "Who may be one of the secretaries."

Dr. Guy moved the alteration of the rule as proposed.

Dr. Farr seconded the motion. The alteration, he said, would permit the Society to have the advantage of the services of Dr. Mouat, who was well acquainted with the statists of Europe, as their Foreign Secretary.

The resolution was agreed to, and the following is now the rule:—"From the Council shall be chosen a *Treasurer*, *three Secretaries*, and a *Foreign Secretary*, who may be one of the Secretaries."

Mr. Neison and Mr. Brown, who had been appointed scrutineers of the ballot, reported that the Council and Officers, as proposed to the meeting for the ensuing year, had been unanimously elected.

Mr. Miller drew attention to one or two recent papers which he thought unsuitable for the Society, and suggested that it would be desirable to serve special notices of papers to be read to the members within reach.

The President, in reply to Mr. Miller, stated that every precaution was taken that none but suitable subjects should be selected for consideration, and he did not think that the rule had been in any way transgressed. He did not object to special notices being sent, but thought that the meetings and subjects were already sufficiently made known through the public press.

Several Fellows then made suggestions based on the practice of other societies, and Dr. Farr closed the conversation by suggesting that the question should be specially considered and dealt with by the Executive Committee.

The Secretary read a list of defaulters, who were announced under Rule 9 to be no longer Fellows of the Society, and whose names were ordered to be removed from the list.

The PRESIDENT stated that the subject for competition for the Howard Medal for 1877 would be "On the Condition and Management—Past and Present—of the Workhouses and similar Pauper Institutions in England and Wales, and their Effect on the Health, Intelligence, and Morals of the Inmates."

Dr. FARR proposed a vote of thanks to the President, the Council, and the Officers, for their valuable services during the past year. He was quite sure that the proposal would be received with favour. The Council had been more successful than the report might lead members to imagine. The number of Fellows was increasing, and on the whole the Society had done a large amount of valuable work during the past year. On looking over the list of papers which had been read during the past ten years, he found several by the President on the promotion of education in the country. At the time when those papers were read education was not so popular as at present, and the President in Parliament took an active part in opening the universities to people of all sects. During the past year he had been very attentive to his duties, and had shown his interest in the Society in a variety of ways, such as adding 20*l.* to the Howard Medal; and there were other instances of his good-will which might be mentioned if he were not present. The Statistical Society was occupied with subjects of the utmost importance to the country, but at present it did not appear to attract the attention which the subjects discussed demanded. Quite recently the Lord President of the Council mentioned that the societies of London were to get from the Government 5,000*l.* to distribute in promoting research in various ways. The Presidents of the Royal Society and a dozen other Societies were on the Committee, but, strange to say, the President of the Statistical Society did not appear in the list. It appeared to him that the Council and members were bound to maintain the position of the Society as one of the very first importance, and should put in a claim to the recognition which its scientific pursuits demanded. Political science was the most important of all the sciences; and its foundations lay in statistics. The Statistical Society had as much right to a place in Burlington House as any other body, and the President had the energy to support that claim in the face of the Government and the public. Their excellent friend Dr. Mouat was especially to be thanked for his zealous services as editor of the *Journal*, and they wished him every success in his new post as Foreign Secretary. As he himself was not one of the retiring Vice-Presidents, he could also venture to ask them to thank the Vice-Presidents for their services.

Mr. TAYLOR seconded the resolution. They were, he said, all well aware that their President deserved their hearty commendations for the very spirited and able manner in which he had conducted the affairs of the Society. The Executive Committee had also been most diligent in their services, and the Secretaries had performed their duties in an admirable manner. He was sorry that they were, to a certain extent, to lose the services of Dr. Mouat. They had

had ample opportunity of estimating to the full his exceeding care and knowledge, and his ability in the position which he had held He trusted that wherever Dr. Mouat went he would receive the same hearty commendations that the Statistical Society now rendered him, and that he would continue in his new capacity as long as Providence permitted him. He never could understand how it was that the Statistical Society was so ignored by the Government; but every effort should be made in order to raise the status of the Society. Statistics were growing to be a science of European, and, indeed, of world-wide value; and he thought if the President and some other gentlemen were to take the initiative in bringing some little pressure upon the authorities, great good would result.

Mr. J. B. Brown said that at the last meeting of the Royal Geographical Society an intimation was received from Lord Derby that the Government had decided to grant 3,000*l.* towards Lieutenant Cameron's expenses. That was another reason why the Statistical Society should also ask for some help.

Mr. Finch said it was most extraordinary that greater notice was not taken of the work of the Statistical Society, because some of the greatest men of the day had joined it—such men as Colonel Sykes and Holt McKenzie; and he could not understand why such men had not had interest enough with the Government to obtain what the Society required. He suggested that some member might write a little memoir giving some account of the great men who had been fellows of the Society; and probably no man could do that better than Dr. Guy.

Dr. Guy, in supporting the resolution, said he was quite sure the Society was very cognisant of the services the staff had rendered them. He was pleased to find that no less than six manuscripts had been sent in in competition for the Howard Medal of this year. More than one of these (if he might judge of them by a cursory glance) were Essays of a high order of merit; and he had received a letter from a medical man of considerable eminence, who stated that he had wished to compete for the Howard Medal on the "Mortality of Hospitals," and had prepared a considerable quantity of material for it; but the pressure of professional work had prevented him from carrying out his intention. One of the indirect advantages which he thought would accrue from making known every year the wishes of the Council in reference to some special subject was shown by that letter, in which the writer said that, as the result of his preparation for the Howard competition, he felt desirous to become a Fellow of the Society. Such instances showed that there was life in the Society, and that they were doing the work that was required of them. In order that the Government might treat the Society with respect, they must first lead the public to care about it; for Government would naturally ask what the outside public thought of the work of the Society. In conclusion, Dr. Guy expressed his satisfaction that the Council had put forward such an interesting and practical subject for the Howard competition of next year, as that which the President had announced.

The resolution was carried unanimously.

The President and Dr. Mouat then returned thanks, and the latter stated that without the active, earnest, and efficient co-operation of the Assistant Secretary, Mr. J. Whittall, it would have been impossible for him, with the very limited leisure at his command, to have discharged the duties of the office which he had just resigned.

Thanks were voted to the Scrutineers and to the President of the meeting.

Dr. Mouat, in conclusion, announced that the next meeting of the International Statistical Congress would be held at Buda-Pesth on the 1st of September; that the Organising Committee had sent a cordial invitation to all Fellows who desired to attend, and that Dr. Farr, and Mr. Giffen, the newly-elected Secretary of the Society, have been appointed the official delegates of England by Her Majesty's Government.

On the Valuation *of* Railways, Telegraphs, Water Companies, Canals, *and other* Commercial Concerns, *with* Prospective, Deferred, Increasing, Decreasing, *or* Terminating Profits.

By William Farr, Esq., M.D., D.C.L., F.R.S., *&c., &c.*

[Read before the Statistical Society, 16th May, 1876.]

CONTENTS:

Part I.

PAGE
I.—Origin of the Paper 464
II.—Value: Conditions of its Existence: Causes of its Variations 465
III.—Interest and Discount .. 472
IV.—Railways: Valuation of their Stocks, London and North-Western, London Chatham and Dover; Purchase of Railways 475
V.—Telegraph Companies: Valuation of their Stock; the Post Office Service.... 484
VI.—Water Works Companies: The New River; other Water Works Companies 487
VII.—Navigation and Dock Companies; Irrigation Companies 495
VIII.—Suez Canal: Government Purchase of Shares; its Sinking Fund 497
IX.—Gas Companies 504

Part II.

PAGE
Description of Tables 506
Some Formulas for their Use 506
Dividends Increasing or Decreasing in Geometrical Progression 510
Value of Dividends at Determinable and Varying Risks 511

Part III (*Tables*).

Valuation Tables at 3, 4, 5, 6, and 7 per Cent. Interest 513
Railway Stock Valuation Tables.... 516
Waterworks Companies 520
Bank Stock and Dividend Tables 521
Prices of Consols............................ 526
Prices of Consols, &c., and of Wheat and Meat......................... 529
Supplemental Table of Value of Stocks... 530

Part I.

I.—*Origin of the Paper.*

The tables I am about to submit to the Society owe their existence to the discussion on the purchase of the English railways by the State. In that discussion, in the paper by Mr. Martin, and in several pamphlets which appeared at the time, we had an opportunity of learning nearly all that can be said on the equity and expediency of a step such as is evidently contemplated by a great minister in the German empire. It was urged, that it would not be equitable to value existing railways by capitalising in the usual way the dividend ruling, as profits might be expected to rise, some of the companies paying low dividends, and others no dividends at all. The arguments on that side appeared to me overwhelmingly strong; and I appended to the report in the *Journal* a specimen table and some formulas by which such valuations would be facilitated. My attention was called to the subject again when a claim was put forward by the Great Eastern Railway Company against Her Majesty's Government for compensation for loss of prospective profits on telegraph lines acquired by the Postmaster General. The claim by that company to the amount of more than half a million was made out by a skilful advocate—one of our distinguished Fellows—on the assumption that the dividend accruing from the profits of their telegraphy would have increased, under certain conditions, for a series of years in geometrical progression. The purchase of the interest of the telegraph companies by the Government, as well as the purchase of the water companies and the gas companies by municipalities, involves the same class of mathematical and financial considerations. The estimation of the values of bank shares, of shares in companies, of canals—even of the Suez Canal—of stock of various kinds, of patents, of profits from private concerns about to be turned into limited companies, of taxes, and of Government securities of every kind, presents a variety of problems which are as complicated as those presented in life contingencies, and require the assistance of tables at least as elaborate: some of those tables I have here supplied.

I do not propose to attempt to value the future dividends in a single case this evening, as every one requires special study and sometimes technical knowledge which I do not possess. What I propose is to lay down general principles, to describe the tables, and to give a few illustrative examples of their application to some of the great existing concerns, which for various reasons supply data extending over long series of years.

II.—*Value.*

Among the many things of this world around us, some excite the desire either to possess them or to enjoy their use for a time. Men covet them: they wish to have them or to have more of them. Allied to covetousness is avarice, of which the difference is well defined by Chaucer:—"Coveitise" (that is the word he uses) "is "for to *covet such things as thou hast not;* and avarice is to withhold "and keep such things as thou hast, without rightful need." That such a passion is strong in men is evident. "Thou shalt not covet" —we need not say what—is one of the Ten Commandments; and the catechism teaches the neophyte in his lesson of duty towards his neighbour, "not to covet nor desire other men's goods." Now it is because men do covet other men's goods that those goods have a value; and the value is commensurate with the intensity of the desire to have, under certain complex conditions.[*]

Covetousness implies the existence of a person and a thing; but appreciable value implies more—it implies the existence of two persons and of two things, and is referred to the things. In the case of two persons and only *one thing*, the thing belonging to the one person may be *taken* or seized without consent by the other; that is theft in a small way and conquest on a national scale; it is the Rob Roy principle:—

> "For why?—because the good old Rule
> Sufficeth them, the simple Plan,
> That they should *take*, who have the power,
> And they should keep who can."

---

[*] *Covet* is often used in a good sense, as in "covet earnestly the best gifts," "covet honour;" and so is "covetous;" but the noun "covetousness" is so often used in a bad sense implying censure, as in the cited text, that it is difficult to restrict it now to the simple desire to *have* a thing or a service. Such a word is wanted; but the desire of acquisition in us is reflected in language on the object, which is declared precious, valuable, as other objects are pronounced beautiful, charming; the sentiment of value, of property, and of charm residing entirely in us. We may adopt *pleonexia*[†], which in English might express the simple desire to *have* a thing. Spurzheim called the faculty acquisitiveness, which becomes morbid in some criminals and lunatics, and is in its state of healthy exercise the parent of the accumulated wealth of civilisation. It is to the merchant and the contractor what the sense of color is to the artist; and some men by instinct as it were measure values, divine profits and losses. Others have no sense of value. As there is a color-blindness, so there is a value-blindness.

The shadows attaching to covetousness, avarice, cupidity, avidity, greediness, imply that the sentiment is unpopular; and this is expressed still further in miser, usurer, extortioner, plutocrat; in the Shylocks, Overreaches, and Harpagons of the drama. An acute observer, and one of the wealthiest men in England, once said seriously: "everyone is the rich man's enemy." Upon the other hand the estimation of a man in an English county depends to some extent at least on his place in the New Domesday Book; and happily in England the wealthy know how to be popular by their public spirit, public work, and liberality. Lord is derived by some from *hlaford*, bread-giver; and at any rate hospitality was one of the feudal Lord's virtues and duties. Generosity, liberality, bounty, in the popular eye will ever shine bright, even in their excess. The Spendthrift and the Prodigal are indeed stigmatised by these names, but the Prodigal was received by the father in the parables with open arms, while Dives was left beyond redemption in flames; he was a rich man. This was quite in accordance with the popular feeling in the middle ages, when usury was under the ban of the Church. The Almighty is to-day justly adored in our Church as the "*Giver* of all good things;" and the most fatal stroke of policy the Papacy ever made was the *sale* of indulgences.

A field for bounty and charity to contend with covetousness and avarice will always remain open; but in the ordinary business of life economics reconciles, while it gives scope to, the conflicting faculties; each man gives what another wants, and gains what he himself desires in just measure. When this is not done, when either is deceived, cheated by an adulterator or a speculator, an economic law is violated. The merchant that gives hatchets for palm oil, bales of cotton for pieces of calico, corn for tools—that under free trade exchanges the products of distant lands, benefits, blesses two nations. The slavedealer is a curse to two countries.

[†] Πλεονεξία is from πλεονεκτέω (πλεον ἔχω, to *have* or claim *more*). It is φιλαργυρία that St. Paul says is the root of all evil, and is Virgil's *auri sacra fames.*

This is what animals do, and man in the savage state obeys the same instinct; he takes what he wants until a new principle dawns on him. Or, again, the possessor may *give* the thing wanted to the suppliant, as the parent gives his children sustenance, the Lord feeds his followers, the bounteous succour the poor. All these acts of give and take involve no measure of value, which only arises when there are at least two persons and two things in presence: when an exchange is contemplated there come as substitutes for give and take, *buy and sell.*

The exchange of measured values is the basis of a new art, a new science. *A* has an ox and *B* has a horse, and the idea of exchanging one for the other might not arise; but let *A* have two oxen, *B* two horses, and then it might occur that *A* does not want two oxen, *B* does not want two horses; so *A* gives *B* an ox, and *B* in exchange gives *A* a horse. Each has now an ox and a horse, and as *A* wants only one ox, *B* wants only one horse, both gain; *A* gains a horse, *B* gains an ox clear.

In this case *A* sells his ox for a horse, and *B* sells his horse for an ox; both have bought and sold, and both enjoy the advantages without the disadvantages of giving and taking. Both get what they coveted. Thus the natural appetite finds its natural satisfaction without injustice. To take another illustration: two men in seclusion have two necessaries of life: *C* has bread, *D* has water in abundance; but *C* only eats a certain quantity of bread; what he thirsts for—covets—is water; *D* can only drink a certain quantity of water; what he hungers for—covets—is bread; the water up to a given quantity has value in the eyes of *C;* the bread up to a given quantity has value in the eyes of *D*. The value attaches only to as much of each article as they severally want; unless each gets a certain amount of bread and of water he perishes; anything over what he wants is superfluous and valueless. Value for scientific purposes, however constituted, can only be dealt with like time when it is measured; and as time can be measured by the shadows on a sun-dial or the revolutions of worlds, so value may be measured by paper money or by gold, or by any unit of value on which people agree. These units are money, in which all values can be reckoned, and for which, if needs be, all other values can be exchanged. The invention of money renders exchange easy; its services are of determinable value. But coins are not always indispensable; when *A* buys an article from *B*, he exchanges money for the article; but if *B* at the same time buys an article from *A*, it is only necessary to pay over the difference in money. If the purchases are frequent on both sides and at different times, by keeping accounts open against each other, it is only necessary to pay the balances in money at intervals agreed upon. Now it is with nations in trade as it is with individuals; but here among civilised nations the only recognised units of value are given weights of gold or silver, as the case may be; and as gold is the lightest weight of any available measure of value, it is most easily transported from country to country.

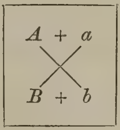
Weight has no constant relation to value; a ton of gold, a ton of silver, a ton of iron, a ton of coals, and a ton of water are of very different values; but in respect of any one of them it is true that under certain conditions, and within certain limits, two tons, three tons, x tons are worth more than one ton in the proportion those numbers bear to unity. The values of things, however, vary without any physical change of nature, with time and place, in fact with the changing opinions of buyers and sellers.

Price of a Ton of each of Eight Articles, 1876.

	Price per Ton.	Weight in Tons of other Bodies worth *One Ton of Gold.*
	£	
Bar gold (g)	104,496	1·0
„ silver (s)	5,992	17·4
Copper (c)	79	1322·7
Beef (b)	65	1607·6
Saltpetre, refined (p)	22¼	4696·4
Wheat (w)	10	10449·6
Scotch pig iron (r)	$2\frac{9}{10}$	36033·1
Coal, Hetton Wallsend (k)	$1\frac{1}{20}$	99520·0

Note.—If articles are sold by weight, then let the weight of iron (r) be of the same value as the weight of gold (g), expressed in the same units of weight, then the equation of value is $gv = r$; and dividing both sides by g, we have $v = \frac{r}{g}$: thus if $g = 1$, then 1 lb. of gold is worth 36,033 lbs. of iron. The 1 lb. of gold is worth 17·4 lbs. of silver. Then $\frac{36033}{17{\cdot}4} = \frac{r}{s} = v$, so the value of the silver unit is expressed in units of iron. The value is inversely as the weight of the two metals. Let silver (s) be the money unit, then $gv = 1 \times 17{\cdot}4$: and 1 lb. of gold is worth now 17·4 lbs. of silver; for many years 1 lb. of gold was worth 15 lbs. of silver. For the convenience of use the gold is coined into sovereigns, which can be counted; and counting can be performed more easily than weighing.

And so it is with labour; there is a general relation between the amount of capital (including labour, easily converted into equivalents of capital) compounded into the time it is engaged, and the value of the various products. But the relation is by no means constant. Labour is often expended without increase of value, and in the same time the labour of two men—the result of the same amount of force—yields products of entirely different values. There is an equation, as Aristotle held, in every exchange: it is not between the amount of work, but between the number of money units A and B consent to give for each other's products; if these are equal, the exchange is in economics equal. The cross values express the degree in which A and B "covet each other's "goods;" which in the one case may be money. Thus A has a in goods and B has b; then the equation may be thus represented:—



or when the attraction between A and b is equal to that between B and a the conditions of economic equilibrium are satisfied. This attraction may be compared with what is called elective affinity in chemistry, where A existing in combination with a, and B with b, you no sooner place them in the same solution than, after some suspense it may be, b goes over to A and a goes over to B; equilibrium is established, and the affinities of A and B are satisfied. There is another analogy between the chemical affinities of bodies and the attractions goods present to buyers. The attractive force of a body for other bodies differs in intensity, but one body only combines with definite proportions of other bodies, and when combination to that extent exists, the one has for the other no further attraction. The covetousness of atom for atom is appeased; so, setting money aside, men only want for use a *certain quantity* of every kind of goods; of land, of air, of water, of food, of fire, of raiment, of houses, of furniture, of service; and the value of any of them diminishes as it becomes more abundant, until it falls to zero; so upon the other hand the value increases as the quantity declines, and if it be a necessary of life its value rises indefinitely as scarcity sets in.

The value of things depends to some extent on their utility. Goods are in general good things: they give life, health, and strength; they yield enjoyment to the highest faculties as well as to the lowest wants of human nature. But the value of a thing in this world bears no direct relation to the good it does; it may do harm, and yet many men will pay a high price for it: so it is a value in economics, which leaves other sciences—such as hygiène and morals—to deal with it under other aspects, as an evil or a good it may be, of the greatest magnitude. Probably, however, everything having an economic value is good in itself, and is an evil only by reason of excess, perversion, or abuse. The value of a thing bears no definite or constant relation to its excellence in an æsthetic sense, or to its high place in philosophy. The reason is obvious, and the fact is but referred to here in order to define the strict sense of value in economics.

Thus it is found that in every case value expressed in money is measured by the mind, and that its price is practically fixed by the concurrence of the seller and the buyer. To test this truth practically, turn into an auction-room. Every article put up for sale has a different value in the minds of the spectators; for one article there is no bidding at all, for a second a few bid, for a third there is the keenest competition; scarcely two articles sell for the same price. Question the purchasers, and you will find that every one has in each case his own ideas of value; for one article he has no liking, of a second he has already more than enough, in a third—say an ugly piece of china—he discovers charms which are hidden from you; a fourth is a family relic prized by a few; of a fifth he and great numbers desire the possession. The biddings are keen. It is possible that some might take into account the labour of making a lot; but as a general rule that does not influence a single bid; every bidding expresses the desire to acquire its possession. Now here is the value of every article sold expressed by the price it fetches, but it is the value as it is appreciated by the seller and the persons present. Go to another auction, and you will find similar articles sell for very different prices; the things may be identical, but the minds of the people are different; their circumstances are not the same. A certain stability is given to prices by the reserve price, and by the presence of brokers who buy to sell again, and are much better judges than the crowd of the demand for any particular article. Take a sale at Christie and Manson's; there the picture fanciers and dealers meet; the price of no single picture depends upon the amount of labour the artists have expended upon its production, but chiefly on its beauty, on the reputation of the artist, on its rarity, on the rarity of similar works, and on the means of purchase. Every person present may desire to have a particular picture; but only a few hold the money free to pay for it; and as the purchase is an exchange of values, the price is regulated by the means as well as the desires of purchasers. In the market of the country town or in the fair there is more stability in the prices; the sellers as well as buyers are numerous and know more about the articles to be exchanged; hence a mean is struck between the supply and the demand in a multitude of transactions; that is the market price. The men, it must be noted, who have no money, whatever their desires may be, have no influence on prices; as they have nothing to give in exchange for the articles offered, their desire to have cannot be reckoned, and does not influence sales.

The desire to have a thing arises from the belief of the buyer that it possesses certain qualities; that is his opinion at the time of purchase, and in that opinion he may be completely mistaken. The horse-market offers frequent instances of such mistakes, and the gambling house examples still more flagrant and fatal.

The Stock Exchange is the greatest market of the world; and there the nature of value is displayed divested of all accessories. The value of a stock evidently does not depend on the labour expended on its source, but upon totally different considerations; the opinion that it will yield future dividends, or the opinion that it may rise or fall, and so sell for a profit or loss another day. These opinions are often right, and they are often entirely wrong. As value originates in a psychical affection, it may be expected to vary in every person not only with facts, knowledge, and opinions, but with the states of ebb and flow—of exaltation or depression—of men's minds. *Pleonexia* is seen in an intense state of excitement at the gambling table or in the betting ring; and it is seen exalted one day, depressed another, in all the European exchanges. Things themselves remain the same or the change is slight; when the fashion changes the tide of buyers rushes all in one direction, and values rise to unprecedented heights; then there is a reflux of the tidal wave, and the holders of stock sell in panic for little or nought what they had bought with half their fortune. The scheme of Law, and the South Sea Bubble have been described by the historians; the same passion is still alive, and cases of speculation, runs on banks still happen periodically, showing how value is a child of the mind. In the Science of value we may seek for remedies.

This science has already found many recognised applications to the cases of values emerging annually, such as rents, profits, interest. These are all valued by tables; but annuities—annual sums, payable during one life, two joint lives, or the longest of three lives—were or might have been exchanged before their values could be determined mathematically; and so were policies of insurances on ships, houses, goods, lives. The same principles apply to the valuation of future profits and dividends.

Time.—As the same thing differs in value at different distances in *space*, so its value—expressed in money—differs in time. It may be worth 1,000*l.* if paid for in ready money, but if payable in a year's time, it may be worth 950*l.*: due in fourteen years' time it may only be worth 505*l.* The effect of distance in years of time is estimated by assuming that the present value of a sum of money payable at the end of x years is the sum (S_0) which at compound interest will amount to (S_x) in x years. That satisfies the equities of the case if the rate of interest is taken as correctly representing the current profit of capital during the time.

If there is risk, that is valued by the doctrine of probabilities; thus, if in a lottery there are one thousand prizes of 1*l.* and forty blanks, the value of one thousand and forty tickets of 1*l.* will only be 1,000*l.* The same result, the same depreciation of value, may be caused by risk as is caused by remoteness of payment; and as both risks and profits vary, and their combination produces corresponding effects on the values involved, several of these combinations are conveniently included in the rates of interest.

Some valuables, such as metals and jewels, are found, or they are extracted from the earth; and some, such as grain and animals, can be multiplied by skill and industry; and as the quantity of these products bears a certain proportion to the labour expended on their production, it has been fallaciously inferred that human labour is the *cause* of value.* Then some products are perishable; they are consumed in use. Others constitute a very different class, they last for an indefinite number of years; such are land and gold. Others, like machines, tools, ships, factories, houses, horses, wear away more or less rapidly. The working energy of a race of men is perpetually sustained, but in individuals it wastes away. Now all the things of durable value perform certain services year after year; every season yields its produce; such goods can therefore be lent, or let by the year, the month, or the day; and the value of their services it is agreed bears a certain proportion (1) to the time the services are rendered, and (2) to their nearness to the moment of valuation. In the case of lands and houses the price paid for the use is called rent; in the case of work—hire, wages, fees, salaries; in the case of money—interest.

III.—*Interest and Discount.*

Aristotle, who first laid the foundation of economic science, held that any charge for the use of money was unjustifiable; interest (τοκος, the child, offspring) is not legitimate, forasmuch, he said, as money gives birth to nothing. Usury was condemned alike by moralists and the Church. This error is rectified by referring to the true sense of value; interest is the price A gives B for the use of money, and it is evident that unless money is of value it will not be hired. As money is itself of use, and is indeed indispensable in effecting the eternal round of exchanges of every kind of commodity, the reason of its value is manifest; and moreover its possessor can exchange it for cattle, sheep, grain, stock, and manufactures, which do increase and yield new products in the Aristotelian sense. The value of the use of money is admitted, but experience alone determines the rate at which its services should be paid. One thing is certain, that its value varies with its quantity; money may be "a drug," or it may be of inexpressible value to the merchant with bills due hanging over him.

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* The fallacy assumes this form: the labour expended on many products increases as their value increases, *therefore labour is the cause of value.*

Discount differs from interest in the fact that it is paid down when the money is lent; while interest is paid at the end of the term over which the loan extends. At the same rates the profits are greater in discounting than in lending money at interest (*interesting*),* and the difference is considerable when the rates are high, as the usurers discovered.

Discount brokers discount some bills not so good as those that are taken at the bank minimum. Thus in 1864-75 the highest rates were generally a half per cent. above the bank rates,† and that covered a risk of loss equivalent to a failure to pay on a *year's* transactions of about 1 in 209 in average cases; in three months' bills, 1 in 836. If such bills had two names, the yearly risk on a bill with *one* of the names only would have been $\frac{1}{14}$; or floating for a year, 1 in 14; for three months, 1 in 56. Of such bills, the chances are, as stated, that one would not be paid—so important is it to have two independent names on a bill.‡

Like discount, interest is the rate paid for the use of money, and payable in perpetuity it is treated precisely as an invariable annuity derived from any source. Rents may vary from year to year, and are often drawn from perishable sources, but regarded as fixed, they are dealt with as annuities.

The value of annuities at constant risk diminishes with the factor of risk. Thus let an annuity of 4*l.* in perpetuity be equivalent to 4 per cent. interest on 100*l.*, then it will be worth twenty-five years' purchase; but if there is a constant risk equivalent to $\frac{1}{105}$, it will be worth only twenty years' purchase. The risk rate enters into the dividends of all commercial undertakings; so rate of dividend includes the ordinary profit of capital at no risk, and the insurance premium to cover such normal risk as the concern is exposed to.

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* When interest is convertible annually at 4 per cent., the annual profit by lending on interest by the year is 4 per cent.; the profit of *discounting* for the same terms at the same rate is 4·167*l.* = 4*l.* 3*s.* 4*d.* per cent.; but the shorter the term the less is the difference between the profits, and for three months' terms the annual profits of discount are 4·102 (= 4*l.* 2*s.* $-\frac{1}{2}$*d.*); of interest, 4·060*l.* (= 4*l.* 1*s.* 2½*d.*) per cent. The limit of the two quantities is 4·081*l.* = 4*l.* 1*s.* 7½*d.*, which is attained on the hypothesis of momently transactions and conversions. (See Introduction to English Life Table III, p. l). The average minimum rate of discount charged by the Bank of England in the sixteen years 1859-74 was 4*l.* 1*s.*, by which they would make a little more annually than at a corresponding rate of interest.

† See Banking Almanac, 1876.

‡ Thus let the rate of a bill without risk be ·04 per 1*l.* per annum, then if the risk for a year is ·005, the risk rate is $\frac{\cdot 005}{1\cdot 045}$ for a year, and one-fourth of that for three months. See Introduction to Life Table.

Dividends are either *constant*, as in the case of the Three per Cent. Annuities, or variable, as in the case of bank stock. When dividend is *constant*, the price of 100*l.* of stock, divided by the 3, 4, 5, or other rate, gives the number of years' purchase the dividend is worth; and the annual dividend divided by the price of the stock gives the rate of interest which the stock will yield the investor (1) during the existence of the stock, or (2) ever afterwards, provided the circumstances are such that the stock will never be reduced or paid off. The dividends of railway *debenture* stock are usually of this class.

In all valuations of future dividends the first thing to be determined is the rate of interest at which the valuation shall be made; and that is not arbitrary; every kind of stock yields its special interest; although it depends on circumstances, the precise effect of which cannot always be determined. The following are examples of various usual rates of interest:—In land, 100*l.* returns the investor 3 or $3\frac{1}{3}$ a-year; in Metropolitan Board Consols, $3\frac{1}{2}$; in Consols during the years 1857-74, 3·4; in bank stock, 4·06; in the debenture stock of the North-Western Railway, 3·8; in French 3 per cent. Rentes, $4\frac{1}{2}$; in the ordinary London and North-Western stock, 5; in some apparently good Colonial and United States stock, 6·0; in some Joint Stock Bank shares 6·0.

Several reasons may be assigned for these various rates of interest that people accept and pay, even where the risk will not account for the whole of the difference. In the case of consols the dividend is subject to no appreciable uncertainty, but the stock price falls or rises as the demand varies; in the case of variable dividends, even in the case of the Bank of England, there is not only a chance of variation of price of stock, but of the dividend falling below or rising above the rate at the date of purchase. It is probable that each large class of securities is held chiefly by particular classes of people, and there is a sort of fashion that directs the stream of investments and determines prices. The easy convertibility of consols, and their use in getting advances, give them not the same collateral attraction as estates in land, but others equally strong; so that both consols and land sell in the long run for about thirty years' purchase, where land is not near towns or railway stations.

In *valuation* the first thing to do is to fix an appropriate rate of interest; and that is determined by experience of the rate prevailing for terms of years in the particular class of securities (see tables, part 3).

IV.—*Railways: Valuation of Stock.*

For the valuation of ordinary railway stock I take the rate of interest at 5 per cent.; and the next step in valuation is the making the best estimate possible of the probable future dividends, which vary according to the conditions of every particular railway. Is this estimate possible? It is impossible to forecast the future exactly; but some such a forecast is made in the case of every purchase of stock; for the value of the railway stock depends upon the opinion sellers and buyers for investment form of the prospects of future dividends. To illustrate the method of valuation, and to test the accuracy of the Stock Exchange valuations—I will take first the dividends and prices of the ordinary stock of the greatest English railway, the London and North-Western. I have the dividends from the year 1838, and the prices of the stock from the year 1844. You will recollect this railway was opened as the London and Birmingham, on 15th September, 1838*—after it had been constructed by Robert Stephenson; and our table follows it down to 1875. It has now 1,532 miles of line constructed; and the capital engaged in it is 64,548,060*l.* The first dividend given was 7, in 1839; in 1842 the dividend rose to 10, and remained at 10 until 1844, the year of the so-called railway mania, when we have the first Stock Exchange quotations; the annual dividends continued to be 10 down to 1846; they fell to $8\frac{1}{2}$ in 1847, and declined until they reached their lowest point of 4 in 1858; then they rose progressively until they reached $7\frac{3}{4}$ in 1871, and $6\frac{3}{4}$ in 1875. We know the dividends to that date, so we have the means of valuing them year by year for each of the thirty-seven years up to 1875; after which, for the present, we may assume for the moment that the dividend will remain stationary, as the assumption does not much affect the valuation for the earlier years.

The value of 100*l.* stock in 1839, calculated from the future dividends, was at that date, 142, slightly below the present price. An original shareholder has earned an average dividend of $6\frac{3}{4}$, but has gone through many vicissitudes, though not so great as the prices on the Stock Exchange. The mathematical value of this stock in 1845 was 129, the highest and lowest prices quoted were 254 and 204, giving a mean of 229, or 100 above the true value as estimated. In 1854 the mean price of stock fell to $98\frac{1}{2}$, and touched its lowest, $91\frac{1}{8}$, in 1859. The mean prices remained from 20 to 36 too low in the ten years 1855-64. It will be noted that the error arose in estimating the value from the immediate current dividends, and not taking the permanent resources, or correctly judging of the future dividends (see Tables VII and VIII). In the five years

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* The first sod was cut at Chalk Farm, 1st June, 1834 ("English Cyclopædia," Robert Stephenson).

1845-49, the stock sold at 173; it was by 50 too high. In 1855-59 the stock sold on an average at 97; it was on an average 26 too low through the five years. So the Stock Exchange can make mistakes, which its speculators exaggerate.* Of the thirty-one values from 1845-75, the calculated value of 100*l.* of stock was, on an average, 128*l.*; the average of all the market prices was 125*l.*, so that in the long run the difference of the fact and the estimate was only 3*l.* It is in the fluctuations that the flagrant mistakes show. When the dividends were descending the differences between the highest and the lowest prices in single years ranged from 13*l.* to 63*l.* From 1855 the fluctuations have been less considerable; the greatest occurred in 1871, when the highest and lowest prices were 159 and 126. The dividend which had been 6 rose to $7\frac{3}{4}$. The dividend in 1875 was $6\frac{3}{4}$.

What is the present value of the future dividend? The quoted price of the ordinary stock at the end of 1875 is the sale value. Is that the mathematical value? This value can only be estimated from the prospective dividends, which will turn upon the difference between the *income* and the *outgo* through a series of years.

The railway, for sums given in the lucid reports, sells the transport of passengers, parcels, horses, carriages, dogs, live stock, merchandise, and minerals over the main line from London to Carlisle, and the numerous branch lines, notably those from Liverpool to Leeds, and to South Wales. It places persons and things in the places where they want to go or are wanted. Population and products are increasing, but is the desire to travel likely to diminish or to increase? And as this railway has rivals, is it likely to hold its own, or to gain ground? Are the directors likely to fix the fares at the right pitch for profit?

The traffic returns and other profits in 1875 were 9,209,706*l.*, full 257,249*l.* more than in the previous year; that is the income (I).

While the Company receives it also pays rents; then there are fixed charges on the debenture stock and the preference stock; and there is the interest on loans.

The income (I) from all sources was 9,436,709*l.*; the outgo (G) for all purposes was 5,905,174*l.*, and the difference was 3,531,535*l.*; or, including preference charges, 7,303,674*l.*; this leaves a balance of 2,133,035*l.*, which is 26,022*l.* more than was distributed as dividend on 31,270,106*l.* of ordinary stock, the average amount through the year. The engineers certify that the permanent and rolling stock, &c., had been maintained in good working order.

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* My friend Mr. Giffen reminds me that the value of a stock varies with the current rate of interest; that is true; and it will account for some of the discrepancies between the actual prices and the calculated values.

The profits of the capital of the Company on 30th June, 1875, were thus distributed in the year:—

Capital in Different Forms.	Price of 1*l.* of Stock.	Stock and Loans.	Value of Stock and Loans.	Dividends.	Rates of Dividends per Cent. of Value.
	£	£	£	£	£
Total capital engaged	1·28	64,548,060	82,859,841	3,505,513	4·23
Ordinary consolidated stock	1·47	31,071,494	45,675,096	2,107,013	4·61
Preference stocks............	1·20	14,371,669	17,246,003	707,919	4·10
Debenture "	1·05	16,676,903	17,510,748	690,581	3·46
" loans	1·00	2,427,994	2,427,994		

Note.—This table has been carefully compiled from the reports of the Company.

Now can the outgo be diminished on the debentures and loans? Can the general charges for fuel, service, or any of its other multitudinous ramifications of expenditure be reduced? Can the revenue be increased? We must leave that for experts to estimate.

I assume that the conclusion come to will be, either that the difference ($G—I$) will be stationary, or increase slowly or by starts, so as to raise the legitimate dividend up to 7, 8, 9, 10 per cent. Then, such estimate being accepted, our tables come into use. If investors will be satisfied with 5 per cent. for their money, a 7 per cent. stationary dividend, in perpetuity, will be worth 140*l.* Again, assuming that the dividend will rise by equal steps up to the extreme limit of 10 per cent. in twenty years, and then remain constant, the addition to the value, at 6·75, namely 135*l.*, will be 43*l.*, raising the value of the stock to 178*l.*; or to twenty-six years' purchase of initial dividend. Make the increment more rapid, and if the dividend be assumed to rise to 10 per cent. in less time, the tables show how much more the rise will add to the value. Again, assume that the dividend remains constant, but is held to be as well secured as the debenture stock, without any increase at all, it will rise in value. If the Government gave the ordinary stockholders the same security as the holders of consols, it would make the dividend of 6¾ worth thirty years' purchase, or 202*l.*, which exceeds the value of the *rising dividend* before given.

I might go through the other great lines on the same principle. But it is unnecessary. I have shown how stationary or increasing dividends can be valued. If any one should be disposed to take the opposite view, and to assume that dividends will decrease, he has only to introduce the *minus* sign, and to *subtract* instead of add the values above given, or any others deducible from the same tables. Thus, assume that the dividend will fall steadily year by year from 6¾ to 5 in twenty years; and the value of the stock as determined by the table is 107*l.*, or only sixteen years' purchase of 6·75. The ingenious author of a recent article in the "Edinburgh Review" assumes that at the recent rates of decrease the aggregate dividends of the railways of the Kingdom will fall to zero, I think, in 1901! That is a view which I do not care to consider.

I will take, however, one of the instructive extreme cases, that of the shareholders of the London Chatham and Dover Railway.

I need not refer to the past history of the company, and can only express a wish that its able directors might succeed in lifting it out of its difficulties.

After the arbitration, 20,010,319*l.* was the amount of capital engaged, and distributed by the arbitration in the following stocks:—*

	£
(1) *Ordinary stock*	8,794,417
(2) *Preference stock*, entitled to dividend of 4½ out of profits of each year	4,694,183
(3) *Debenture stock*	5,955,082
Sheerness rent-charge and subscriptions by other Companies	566,637

The revenue account for 1873 showed as the receipts of traffic, of steamboats, and of other sources, 907,396*l.*, of which, after deducting 565,910*l.* for charges of all kinds, 341,486*l.* remained. 339,737*l.*† were paid as dividends, namely, the full amount due (262,283*l.*) on the debenture stock; 77,454*l.* on the preference stock, leaving of the latter 133,784*l.*, unpaid. The deficit is not cumulative. Thus an increase of 133,784*l.* on the profit side will pay the arbitration preference shareholders in full; another 87,944*l.* will pay 1 per cent. on the ordinary share capital.

The preferred stock is (1876) at 69, and as the last dividend was 1·875, it implies that an increase of dividend is anticipated. Now the dividends paid up to 30th June of the five years ended 1875 were 5*s.*, 1*l.* 12*s.* 6*d.*, 1*l.* 13*s.*, 1*l.* 8*s.* 6*d.*, and 1*l.* 17*s.* 6*d.* If the dividend of 1875, namely 1·875, be taken as the starting point, we may ask the tables what the value of the preferred stock is, on the assumption that the dividend—last year 1·875—will rise to 4·500 in thirteen years, and then remain constant. The estimated value of the stock is 69 by the 6 per cent. interest valuation table.

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* Mr. Slaughter, "Railway Intelligence," 1875. The ordinary and preference stocks have since been increased.

† The balances at the *beginning* and *end* of 1873 were 78,256*l.* and 80,005*l.*. leaving an excess of 1,749*l.* in favour of the year, and making the profits 341,486*l.*

The price of the 100*l.* of preference stock in the market is, by an unexpected coincidence, also 69. The price on the same assumption, by the 5 per cent. table, is 77; but it is probable that persons who deal in low-priced stocks will expect to make more than 5 per cent. by their investments.

Now turn to the *ordinary arbitration stock*, which can claim no dividend until the preference stock pays 4·5 in perpetuity.

100*l.* of the ordinary stock of the London Chatham and Dover now sells for 23*l.*, and to sell at that price it is assumed in the market that a dividend *will be paid* at *some time*, and if that is so, the most probable assumption is that it will be at first a low and then an increasing dividend. Let it be assumed that the first dividend will be paid at the end of fourteen years, and that it will be 0·2 in the fourteenth, rising up to 3 per cent. on the stock in the twenty-eighth year, and afterwards remain constant. Then the calculated value of the 100*l.* of ordinary stock is 16*l.* The interest at the end of the term will be 12·4 per cent. thereafter on the money invested. The tables will test any other hypothesis.

But unless the amount of dividend here assumed be realised in *less time*, or its amount be exceeded, the price of 23*l.* for 100*l.* of ordinary stock is too high; should higher and more rapid profits be realised, the calculated value of 16*l.* is too low. It is not easy to see what may happen to the southern railways if through a tunnel, or through easy steamers, a strong stream of traffic should flow between Dover and Calais.

The valuation has hitherto been founded on the prospective dividends. The cost of construction is generally also referred to; thus the capital "received and expended" on the 128 miles of line open for traffic on the London Chatham and Dover on 30th June, 1874, was 18,574,690*l.*, or about 145,000*l.* a-mile. This heavy charge is the difficulty hanging round it. The capital of the London and North-Western "received and expended" on about 1,077 miles of line was 49,443,039*l.*, or 45,908*l.* a-mile. The capital expended on 324 miles of the South-Eastern line was 17,223,067*l.*, or 53,158*l.* a-mile. It is right to bear in mind that the "capital" quoted in the books on railways may not have been received in money; it was *capital stock*, which would be less than the *money* received if the stock was at a premium, and more if the stock was issued at a discount. Had the London Chatham and Dover been constructed even at the same rate as the South-Eastern, it would have cost 6,804,224*l.*, on which its returns in 1873 would have paid 5 per cent. These instances prove the fallacy of the doctrine that the value increases with the cost of production, and, on the contrary, demonstrate the intimate relation between the expected profit and the value of the property out of which it grows. Other examples will be found in the several great railways, such as the *Great Northern*, the *Great Western*, the *South-Eastern*, the *Lancashire and Yorkshire*, and the *North-Eastern* on the one hand, or the *Great Eastern* and the *Metropolitan District* on the other.

The capital of the railways of the kingdom in the sense already explained, up to 31st December, 1874, amounted to 609,895,931*l.*, according to Captain Tyler; the gross receipts (I) from railway working were 56,899,498*l.*, and the working expenditure was 31,647,517*l.*; so the net income from this source was 25,251,981*l.* The capital was thus held:—248,528,241*l.* as ordinary stock, 200,930,629*l.* as preference and guaranteed stock, 111,170,991*l.* as debenture stock, and 49,266,070*l.* as loans.

Railways have from the first been worked on the principle of limited liability. The rates of dividend were 4·5 on the ordinary *stock;* 4·3 on the debenture *stock;* but these figures do not give the profit from investing money in the two classes of securities. The railway number of the *Journal* presents a judicious summary of the statistics up to that date. Captain Tyler's report and the reports of the companies supply the latest information. The various forms of stock, of different orders of security, and some offering fixed, others variable dividends, with speculative elements in them, are well suited to the market; but I cannot help thinking that the present multiplicity of stocks, yielding different dividends, in the same railway, and therefore of different fluctuation, is prejudicial to the holders. It puzzles purchasers. There is a tendency to consolidation, and that for various reasons will raise the values; but the consolidation to be equitable must be based on scientific valuations. I find that the number of different stocks quoted in the "Investor's Manual of the Economist" for April last in *seven* railway companies were 164! Railways under embarrassing or perplexed engagements might find a difficulty in the simplification of stocks, but with the greater concerns the obstacles to unification cannot be insurmountable. The stocks would be more saleable, the dividends less fluctuating.

Railway Companies.	Total *Capital* Expended or Raised.	Number of different kinds of Stock.
	£	
Caledonian	26,452,338	33
Great Eastern	30,612,034	32
„ Northern	25,326,240	20
London and North Western	66,946,401	23
Manchester, Sheffield, and Lincolnshire	20,806,311	20
North British	23,961,898	15
„ Eastern consols	51,136,359	21

Consolidation might well proceed further with advantage to the shareholders, and it is undoubtedly in the public interest that the absorption of the small lines should go on until the whole country is covered by a few well-organised concerns. Here again the value of each small line has to be determined. The science of valuation will supply the means of amalgamation on equitable terms.

In process of years the nation will probably desire to enter into the possession of many of its highways, and then the question of valuation will acquire enhanced importance. The State purchase must be based on four principles: (1) the satisfaction of the legitimate expectations of the stockholders of various orders, especially as regards giving them a higher order of security; (2) perfected organisation in one body of the able managers, officers, and men who conduct the business of the consolidated lines at the time of purchase, who should also obtain greater security of tenure; (3) more equal extension of the benefits of railway transport, on the lowest practicable terms, to the whole trade and population of the kingdom; (4) and finally, on the principle that the country should pay the real ascertained value of the property, and not a value estimated on a fictitious basis.

As to the terms of purchase, it is evident that each railway will have to be separately valued; and here I may state that it will be no doubt right to consider at the time (1) for what sum in money each railway—its land, its earthworks, its tunnels, its bridges, its stations, its permanent way, its rolling stock—can then be purchased, or made by the State; and (2) the market price of the stocks at the date of purchase. But neither the one nor the other can be taken as the value of the railway. To take the latter first: the market price expresses truly the value of the stock bought and sold as estimated by the particular buyers and sellers of the day, who create the quotation; but they may have reasons of their own for selling and buying small amounts of stock in the market. How much is bought and sold under the daily quotations of the stock exchange we do not know, but the proportion of the whole sold must be small; and are the owners of the millions of stock to be bound by the fluctuating prices settled by the buyers and sellers of a few thousands or hundreds of thousands? Aristotle says that every product has two uses. A shoemaker makes his shoes to *wear* or to *sell;* so stocks are purchased as investments—that is for the dividends—or for profits on the sale. A *permanent* rise or fall of 1*l.* in the North-Western dividend raises or depresses the estimated value of the stock by 20*l.* either way, and so produces a fluctuation of 40*l.* This is a great temptation to speculation; for if a speculator can persuade holders that a *temporary* fall of dividend will be *permanent*, he buys at a low figure and then sells as the dividends, or as opinions of their value, rise. The money is won in large sums in a few days, and it is often lost as quickly as it is won. The lower the price of the stock, the greater are the gains or losses on the same rises or falls of price. But the storms of speculation can only swell the waves mountains high for a time. The waters afterwards fall as much below as they were above the natural level, and then the surface of the ocean is at the same mean distance from the centre.

So our calculation shows that the average market price extending over a series of years, agrees closely with the value estimated by science in possession of adequate data, as it should. The mean exchange value of the London and North-Western stock in thirty-one years was 125, and differed little from the mean of the calculated value (128). A slight difference in the rate of interest would have made these values identical. But the exchange prices fluctuated excessively from year to year, and they differed very much through long intervals of time from the value as they would have been determined by anyone who could have estimated the prospects of future dividend correctly, and could have applied to them the instruments of precision science places at our disposal.

It is gratifying to find that the true determinable value of the magnificent property, which has been created by the genius of Englishmen in the last fifty years, and now stretches its level lines of traffic over plains or rivers, and through hills, is subject to the same certain laws as the matter, fire, and vapour which it places at the service of a great part of the nation.

The *true value* of the stock of a great railway does not rise and fall suddenly; and certainly we shall not see its prices affected by the number of people who travel in an Easter week, when it is known that the present value depends not on the traffic of one week, but on the traffic through a long series of future years.

Railway stock is subject to the general laws of value; and when a large quantity is thrown on the market its price falls. The companies offer stock for money, and as men can at once only dispose of a certain amount of capital accumulated from the savings of the year, or taken from other investments, the stock offered in large quantities is cheap, money dear. By the end of 1837, Smiles says 30 million pounds had been expended on 1,500 miles of railways; and it was estimated that 22 million pounds more were required to complete the railways under construction.* That produced a fit of speculation; it was short, and was followed by collapse. But in 1844-46 there was a demand for 180 million pounds more to cover authorised extensions; the result was another effort to buy stock without adequate means, and another panic. The issue of stock now going on has some depressing effect on prices; and the closing of other openings for the investment of capital accumulating out of savings has a counteracting effect. Should the country purchase any of the railways, for financial facility they must, in my opinion, be taken by groups; thus the South-Eastern, the London Chatham and Dover, the Brighton, and the London and South-Western, cover the assailable coast of England from Chatham to Portsmouth, or further, and must, in case of war, be held by the Queen for the kingdom's defence, to which they must be made subservient. The capital of each created is under 20 millions, or in the aggregate nearly 79 million pounds. They are competing lines, and it would not be fair to purchase them separately, but the 1,400 miles of line may be purchased at once at less cost than the Crimean war. We know what Prince Bismark is doing in Germany; we know what a Chatham would do in England for the salvation of its future life; and we have no reason to despair of English statesmen being able to conceive a high policy, and to execute it without any financial blunder. The administrative capacity is available. The ablest chairman of the four boards, accepting strategic conditions and retaining a pecuniary interest in the commercial success—such as sways directors now—could work all the combined lines in harmony, and at a reduced expense, so as, in time of peace, to afford the public much greater accommodation than they now enjoy. The traffic of these lines, and the expenses of working can to-day be determined; so with our present science the value of the lines could be accurately estimated. Each line would of course be separately valued, and it is scarcely necessary to add they could neither be valued by any rough rule, say at twenty-five years' purchase of the actual dividends, nor at the stock exchange prices. The ordinary stock of the London Chatham and Dover line has paid no dividend for fourteen years; and $25 \times 0 = 0$; whereas the mean Stock Exchange price in 1875, was 25. Both estimates are, I believe, erroneous. The Brighton dividends have even recently undergone strange fluctuations, and the price of stock changes. The South-Eastern and the South-Western have maintained an even course. There could be no difficulty in dealing with each case justly, on the basis that the true value should be given the holders of each separate debenture, preference, and ordinary stock; and it would be right to provide that the shareholders should divide for a term of years a due share of the profits from any consolidation which the companies themselves are at liberty to propose, if not to carry out, without parliamentary sanction.

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* Jubilee Memorial, pp. 141—42.

The railways could never have been what they are, but for the discovery of the Electric Telegraph.

V.—*Valuation of Stock of Telegraph Companies.*

I propose to take as another illustration the purchase of the *Electric and International* Telegraph Company.

The Electric Telegraph system of Wheatstone and Cook was in operation in 1839, but made slow progress until 1846. The commercial success was by no means certain. In that year the Electric Telegraph Company began its operations with 140,000*l.* of capital, a large portion of which was expended in the purchase of patents. The company flourished; it supplied a want that existed and grew, the want of men to communicate quickly with each other at distant parts of the country. New capital was invested, and on 31st December, 1868, the shares amounted to 1,169,875*l.* The average amount of capital under investment through the whole term was 739,492*l.* The first dividend was paid 30th June, 1849, and the annual dividends from 1858 to 1868 were 6, 6¾, 7, 7, 7, 7, 8, 9, 10, 10, 10, to every 100*l.* of share capital.

The average price of 100*l.* of the stock on the Exchange was 133 in the year 1866, and 138 in the year 1867.* In those years the dividend was at the rate of 10 per cent.; it had been at that rate for three years, and under its Act the dividend was restricted to 10 per cent. Now 10 per cent. on a capital of 1,169,875*l.* yields an annual dividend of 116,988*l.*, which, valued at the price (138) prevailing in the year 1867, was worth 1,614,428*l.*, not quite fourteen years' purchase. Money invested at the price of 138 returned interest at the rate of 7¼ per cent. The company had issued no debentures; had no preference capital; instead of a debt it had a *reserve fund* of 138,159*l.*, which, after paying 93,258*l.* to make up back dividends to 10 per cent., left disposable 44,901*l.*

The income of the company from all sources in the year that ended 30th June, 1868, was 355,118*l.*; the outgo for expenses of every kind, including 73,777*l.* for repairs and maintenance, was 208,732*l.*, leaving a profit of 146,386*l.* This exceeded the dividend divisible under the company's Act by 29,398*l.*

The stock of this company was purchased under the provisions of the Acts of 1868 and 1869, which enacted the terms of purchase in these words: "The price to be paid by the Postmaster-General "to each company for its undertaking shall be *twenty years' purchase* "of the net profits during the year ending on 30th day of June, "1868, so conveyed." By the Act of 1869 it appears that the property was acquired for *twenty years'* purchase of 146,941*l.*, or for 2,938,826*l.* On the dividend of the year, at twenty years' purchase, the cost would have been 2,339,760*l.*; but the Act provided explicitly that the price should be twenty times the "net profits" of the preceding year, which the company had been very successful in swelling. Thus the cost was 1,324,398*l.* over the value estimated at the price of the stock sold in the market in the previous year. The other companies got equally good terms. Parliament was generous; it paid liberally a spirited company which had inaugurated a new system of electrical intercommunication of incalculable advantage to mankind, for the purpose of placing it within the reach not only of Governments and of dwellers in cities, but of inhabitants of the remotest villages, which are thus in direct, immediate communication with the rest of the world.

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* The price ran up from 134 in January, 1867, to 154 in December, and to 195 when the Act passed in 1868; at the end of 1869, after the purchase was confirmed, the price was 261.

The year before the purchase the Stock Exchange would not give more than fourteen years' purchase for the dividends, and that price included the value of anticipated increment of dividend. The company was not unthreatened with competition for its exceptional profits, but it is probable that in time confidence would have increased, and the price might have risen to seventeen or eighteen years' purchase. Still telegraph stock does not even at the present day command thirteen years' purchase. Thus the 5 per cent. dividend of the Great Anglo-American Company sells at 12·4; the high dividends ($16\frac{1}{2}$) of the Submarine stand at the same figure, 12·4. They are valued by 8 per cent. tables, as investors expect to make the equivalent of that rate of interest for their money. They know the risks of novel works. The Government in this case—on the above terms—purchased the profits of the Telegraph Company for about 94,000*l.* a-year. The fourteen telegraph companies were purchased for 5,715,048*l.*, or at an annual charge of about 191,000*l.* (see 31 and 32 Vict., cap. 110); but this did not cover the cost of collateral claims. The telegraphy of the country was in 1869 carried on by electric companies and by railways, either separately or in combination, under the most complicated conditions and agreements for varying terms. The Electric Telegraph Company had taken, in 1850, a line to work jointly with the directors of the Great Eastern Railway. The railway had at first claims to three-fourths of *receipts* on paying three-fourths of *expenses*, but by an indenture of 1853, they ceased to have any claim on the "receipts," and handed them, as they came in, to the Telegraph Company, which had created a business, and sold the goodwill of the whole concern under the Act to the Postmaster-General for twenty years' purchase. The Postmaster-General did for the railway more than the telegraph company had done, and had naturally to pay the company for way-leaves, offices, and other conveniences so long as the telegraph wires ran along the line; but over all this the railway put in a claim of compensation for the value of its "reversionary interest" in the "*receipts*" of the telegraph company, which could of course have carried its line elsewhere had it not come to reasonable terms with the railway company when the lease expired in 1878, and which that company could never have realised, even at great cost in competition, with the telegraph company.

The estimated profit of the Electric Telegraph Company on the eastern section of its field was 6,498*l.*, in which the railway had no *reversionary interest* whatever. It, however, claimed 337,629*l.* under this head. Mr. Price Williams made the calculations; he took what he assumed were the net receipts and capitalised them at thirty years' purchase! This is a sample both (1) of the preposterous claims brought on the Government after the purchase of the whole of the telegraphic plant, and (2) of an ingenious mode of capitalising dividends. The Recorder of London, I believe, awarded the company something above 70,000*l.* for what, after reading all the papers, I feel confident was not worth 20,000*l.* So much do the estimates of value differ.

Some railway companies, like the London Chatham and Dover, themselves carrying on telegraphy, were compensated under the 9th section of the Act of 1869; they were entitled not only to twenty years' purchase of their net annual receipts, but to twenty times the amount of the *estimated annual increase.* Under this latter head enormous sums were claimed and got. How the clause came into the Act it is difficult to imagine. It betrays a strange want of technical knowledge—somewhere. The twenty years' purchase covered the value of any possible increase of profits; it is now the full value of the best railway dividend.*

The errors are not likely to be repeated, but they seem to show the necessity of such investigations as we are going to discuss this evening.

The greater part of the concession to the railway companies was a pure gift of Parliament. The telegraph companies, amidst difficulties, had the merit of giving a series of scientific discoveries a commercial value; the railways had done nothing of the sort; it is true they had very properly availed themselves of the new art for their own purposes; but they had no right to be included in the Bill, as they were not telegraph companies; and had the Postmaster-General been left free to bargain for way-leaves with them, or to run his telegraph lines elsewhere, there would have been no difficulty in the matter. Money was thrown away; but the purchase of the telegraphic system by the Government was a bold, wise stroke of policy, and it has to commend it all the arguments that held in favour of the penny post, in 1839; which McCulloch denounced because it "occasioned the sacrifice of nearly 1,100,000*l.* a-year of "revenue."* Efficient telegraphy economises time, and will save millions in the conduct of business; the stocks of goods in warehouses, the carriage of goods, the payment for goods, are all affected by the rapid communication between merchants and traders; the ready command of the services of professional men, and the advantages of the instant interchange of thoughts, wants, and pleasures between friends, though not easily expressed in money, are none the less real. Then there is an expectation as there was in the case of the penny postage, of an ultimate rise of revenue, which must be reckoned, and by our tables can be estimated. The net revenue of the post office fell from 1,659,510*l.* in 1839, when the old tax ruled, to 500,789*l.* in 1841, when the new system was in full operation; but the profit advanced year by year, and in 1874 was more than 1,082,502*l.* in excess of what it was in 1838. Still it is not by revenue but by its services that the advantages of the post office are to be estimated; now in 1874 it delivered to different addresses 967 million letters, 79 million post cards, 259 million book packets, at the charge mostly of pence and halfpence, besides cashing money orders, opening savings banks, granting small insurances, and selling annuities. The gross revenue from telegraphs was 1,160,000*l.* in 1874, and the expenditure 1,051,000*l.*, leaving 109,000*l.* towards interest on capital. Revenue was sacrificed for the sake of the penny postage; and should the gratuitous present of some millions to the railway and telegraph companies stand in the way of cheap telegraphy? To enable everybody to send a letter by post for a penny, was worth the loss of a million a-year for a time; so to enable everybody to speak *a few words* to everybody in these islands for sixpence is worth some present sacrifice; it will be an investment certain to return in time to the exchequer through a thousand direct and indirect channels.

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* Mr. Göschen's speech in 1868 showed a knowledge of "value" such as we might expect in the author of the work on Exchanges, and his anticipations were too exactly realised.

I will now give an instance of a great property distributing one of the necessaries of life, which for twenty years returned no profit on capital, but has since repaid the interest and its cost a hundredfold.

VI.—*Water Companies.*

Water, in combination with air, carbon, phosphorus, and some minerals, constitutes a large portion of the body, and it is continually renewed at intervals through the day to supply the vapour and the waste in the production of the vital forces. Wine, cyder, and milk supply only part of the water required for beverage, and the rest is got from infusions of various kinds, such as beer, tea, coffee, soups, drinks, or the "crystal stream" of rivers and wells. The quantity of water thus consumed daily by a man varies with the weather, but it is on an average three pints. Meat and vegetables are cooked in boiling water, and flour is made by it into bread. This fluid is also required as civilisation advances, for daily ablution, for baths, for the laundry, for houses, and for streets; and in recent years, since the invention of Bramah, it has been ~~used as a carrier of refuse.~~ Every city wants water. At first it is supplied direct by rivers, wells, and springs, then by aqueducts, of which Rome offers grand examples. It was often distributed to the houses by carriage, and in London, at the time the New River was opened, we read of the petition of 4,000 watermen. The city of London had been partially supplied for centuries by conduits brought from Tyburn—one of lead, 6 inches in diameter: and in 1594 a Dutchman laid down a wheel at London Bridge, which, driven by the tide, forced Thames water by leaden pipes into the houses; but in the reigns of Elizabeth and James the population was increasing so rapidly that the wells were polluted, and a series of fatal plagues broke out among the citizens—dysenteries, sweating sicknesses, fevers, plagues. The stream of life was infected at its source. Thereon the citizens—though diseases had not then been traced to their true sources—felt the want of pure water, and the fires of the wooden houses reminded them of one of its uses; so the Lord Mayor obtained powers under an Act of Parliament (3rd James I, cap. 18) in 1605, to bring the waters of the New River from Chadwell near Wear, and Amwell, to London. Nothing was done until a merchant adventurer, a goldsmith of the city, undertook the work, and completed it in 1609-13.

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* "Commercial Dictionary," Art. Postage and Post Office.

The New River was constructed by Hugh Myddelton, M.P., a merchant adventurer, a goldsmith, and a contractor; one of the first of that enterprising English race. He provided the capital, the energy in overcoming the powerful opposition of landowners or the indifference of the public, and the engineering skill; and he completed the New River in four years (1609-13). King James, in the middle of the undertaking, when capital failed, came to the rescue, and for thirty-six of the seventy-two shares, gave Myddelton the half of the sums expended and to be expended. A strict account was kept, and the capital advanced by the king for his thirty-six shares was 8,610*l.*; thus the entire capital was 17,220*l.*, or, as Mr. Smiles estimates it, in round figures, 18,000*l.* Each share represented 250*l.* The first dividend of 15*l.* 3*s.* 3*d.* a-share was declared in 1633, or twenty years after the completion; it was at the rate of 6 per cent. per annum. No further dividend was paid until 1636, and that was at the rate of 1*l.* 5*s.* 8*d.* per cent.

Myddelton, in the true spirit of a merchant adventurer, entered on this great enterprise to confer a great boon on the city, and in return expected profits. He accordingly, after the triumphal opening at the New River Head, sold twenty-eight of his thirty-six shares, probably at a considerable profit; and at the incorporation, in 1619, he held only two shares; his son one; his brother, Sir Thomas one; and twenty-six other adventurers thirty-two shares; but no one held more than two shares. Myddelton died in 1631, before the shares yielded any dividend. The distribution proved expensive; the elm pipes leaked, gave way, and decayed; the populace hesitated for years before they consented to pay the water rent. The taste for purity had to be created. Charles I, in his need, sold the King's shares for a fee farm rent of 500*l.* a-year; that was for 14*l.* 10*s.* a-year on a share of 250*l.*, or nearly 6*l.* per 100*l.* The company, when its first difficulties had been overcome, flourished; after 1640 its *dividend* increased; it was at the rate of 200*l.* a-share in 1700, 500*l.* in 1800, and 850*l.* in 1861! "At only twenty years' purchase," says Mr. Smiles, "the capital value of a single share at "this day (1861) would be about 17,000*l.*" It is plain that shares returning no dividend for twenty years must afterwards yield high dividends if the deficiency is to be made up.

Placing ourselves in the position of an original shareholder in 1613, and assuming that there would be no dividend for twenty years, that the dividend then would be 6 per cent. per annum on the share capital, and that it would further increase in the twenty-first year, and afterwards year by year until 1700, the eighty-seventh from the date of valuation, what must that increase be in order that the rising dividends might at the opening be worth 100*l.*?

The legal maximum interest of money was 10 per cent. in 1613; it was reduced to 8 per cent. in 1625; 6 per cent. in 1651; and 5 per cent. in 1714;* so valuing by a 7 per cent. table, the dividend per cent. on capital to be worth 100*l.* in 1613 must have risen from 6*l.* at the end of the twentieth year, to 96*l.* at the end of the eighty-seventh year; the share of 250*l.* would therefore have returned 240*l.* *a-year* in 1700; and at the same increment 582*l.* in 1800. It is probable that part of the profits were devoted to the extension of the plant; and that has been undoubtedly the case in later years. Reckoning interest at 7 per cent., *a dividend of 7 per cent. on every 100l. of share capital from the origin is of the same value as a dividend of 6 deferred twenty years, and then rising to 85 per cent. per annum* in eighty-seven years, that is in 1700. Thus the dividend would be 212*l.* as calculated on the original share of

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* Anderson's History of Commerce.

250*l.*; the actual dividend in that year is stated to have been 200*l.* The increment of dividend in distant years at this high rate of interest has little effect on the value of the share at its origin; but the annual dividends of the seventy-two shares, which were 1,080*l.* in 1633, were 60,000*l.* in 1850, or 833*l.* a share; and the capital expended by the company—probably most of it from invested revenue—"in carrying out and completing their works now in "existence," was, according to their private Act of 1852, declared, on grounds not given, to be 1,519,948*l.*;* that is 21,110*l.* a share. In 1873 the state of the capital is shown in the annexed table, p. 520. The market price of 100*l.* of the declared share capital is not quoted, but it is probably not less than 196*l.* The shares are freehold, and have been much subdivided. Under their Act the water rate of the company may not exceed 4*l.* per cent. per annum of the annual value of a dwelling-house under a rent of 200*l.*, nor 3*l.* per cent. on houses of rents exceeding 200*l.*; but "extras" are allowed for water-closets and heights. As its annual value rises the city is subject to the pull of the New River rate. The company has improved its supply since 1852; it has reservoirs, engines of great power, and filtering beds. This property has been as beneficent as it is magnificent; and Myddelton is none the less a benefactor to mankind, because he undertook the work for profit. He deserves the praise accorded to him on his monument at Amwell, raised by Mr. Mylne; where the New River is called "an "immortal work, since man cannot more nearly imitate the Deity "than in bestowing health."

To James I great credit is due, for it was through his intervention the work was completed; Charles I, in his necessities, deprived the crown of its reward from increasing dividends. It is only to be regretted that the "Lord Mayor, commonalty, and citizens of "London," did not find Myddelton the 18,000*l.* of capital for his great enterprise, which although it did not pay any dividend for twenty years, had in it the commercial elements of an inexhaustible revenue. The generation before them had made the Lea navigable to Wear, near the source of the New River, by the "new cut," in ten years (1571-80); and the corporation raised 20,000*l.* "on the "citizens" in 1609 for the improvement of the forfeited lands in Ireland. The oversight is inexplicable; but it must be stated to the credit of the city that it backed the goldsmith against interested opposition in parliament, and lent him 3,000*l.* at 6 per cent. for a short time after the work was completed.

The continual increase of the New River dividend is chiefly due to the increase of population; and to the intake of water from the

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~~* 15 and 16 Vict., cap. 160.~~

River Lea, involving no great increase of cost for delivery in London; the company had the best of it in dealings and figures with the Lea commissioners.* stet Run on

The New River is a proof of Adam Smith's remark, that the supply of a town with water is one of the undertakings that a company can manage with profit; and that, as in the case of banks, without an absolute monopoly. The New River had, under its Act, no legal monopoly; and in 1630, Charles I sanctioned a project for "bringing certain springs of water into London and Westminster" from within a mile and a half of Hoddesden, in Hertfordshire. They were allowed to raise the money by a lottery; and engaged to pay for their privileges 4,000*l.* a-year into the exchequer! That was before the New River, which had been open seventeen years, had paid any dividend. Anderson gives no further trace of the project or the projectors.†

South London lies near the ground water and used largely wells and pumps; it had also its water wheels under London Bridge; but in 1783 the Lambeth Company opened a pumping station by the Thames opposite Charing Cross. The Vauxhall Company dates from 1805; the East London Company began its operations about 1806; and the West Middlesex in the same year pressed the New River on its west flank. The Grand Junction cut through the West Middlesex field in 1811. The Southwark, the last born of the London Water Companies, began in 1822, and was subsequently, after years of contest, amalgamated with the old Vauxhall Company.

It was proved fatally, by the cholera epidemic, that the Thames waters were very unlike the water that Myddelton brought from the springs of Hertfordshire; and after 1848-49 great efforts were made to keep impurities out of the Thames and the Lea, and to purify the waters by settlement in reservoirs and filtration.‡

As the New River Company had no monopoly, the other companies were justified in endeavouring to participate in its high profits by doing the same service; and this they did at a time when London—beyond the limits of the square mile of the city—had none of the advantages of municipal government. The population had no powerful government. In this state of metropolitan anarchy the new water companies went to war in the streets, and supplied the public probably with water of indifferent quality, at prices perhaps as little remunerative as the New River got at its origin. They went to Parliament, and the result is that the New River has its own domain, beyond which it cannot travel. Each company enjoys, as against the others, protection; which, so long as it subsists, confers a temporary monopoly, and affects the value of their shares.

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* At one time the water was taken from the Lea by a pipe of regulated diameter; for an increased supply, the New River Company, with a sagacity it has shown more than once, offered the Lea Commissioners *double* the price for a supply through a pipe of *double* the *diameter*. On its being discovered that this abstracted *four times* the quantity of water before taken from the Lea, the agent of the Lea Commissioners exclaimed: "O, I see mathematics may be good for "something after all."

~~† "History of Commerce," under year~~ 1630.

‡ See a very full statistical view of the London water companies and their works in 1866, Supplement to Registrar-General's 29th Annual Report. See also "Municipal London," by Mr. J. B. Firth.

But London has now a representative board of works, which has carried out the extensive system of sewers, as well as the embankment of the Thames, and the question has been raised whether the time has not come when the greatest city in the world should supply itself with water and gas on the co-operative principle. For a city is a co-operative company on a grand scale, and its self-governing functions admit of extension as civilisation advances. That is a great financial question. Mr. Bateman, C.E., the distinguished engineer who constructed the successful soft waterworks of Glasgow and Manchester, has given an estimate, deduced from extensive observations, showing that 300 million gallons of pure water can be brought in another New River, by gravitation, 183 miles, from the mountains of Wales, and delivered daily, at high pressure, under the constant supply system, in the houses of London, when its population is 6 millions, at an annual cost of 740,000*l.* For 8 million pounds he contended works and pipes for the delivery of 100 million gallons daily could be constructed; the interest of which at 4 per cent. would be 320,000*l.*, making with the working expenses of 150,000*l.* no more than 470,000*l.* In the year 1866, when Mr. Bateman made his estimate, the water rents of the London Companies were 799,536*l.*; their aggregate capital in shares and loans was 8,769,514*l.*; the houses they supplied 440,288, inhabited by 3,070,226 people.[*] Mr. Edwin Chadwick and others who have given much attention to the subject, have proposed various schemes of water supply on the constant system, which might yet be undertaken. It is admitted by all that when London takes into its own hands the water supply, the position and past services of the existing water companies and their officers should be fully recognised. Mr. Bateman went the extreme length of proposing the guarantee of 450,000*l.* of annual dividends. Be this as it may, all the different financial elements, the history, the income, the expenses, the net dividends (present and prospective) —allowing *nothing for monopoly*, but adequate profits on capital at some risk—would have to be taken into account in the case of each company.

[*] See Registrar-General's Supplement to 29th Annual Report.

δ ~~I annex a summary view of the dividends and market value~~ of ~~the shares of the London companies~~ during five years. ~~It will be seen that~~ the dividends ranged from $5\frac{1}{2}$ to $9\frac{3}{4}$ per cent. per annum, and were bought and sold at prices ranging from twenty to twenty-one years' purchase.

have

the shares

The valuation of the shares of the respective companies must take into account among other elements: (1) the water rents; (2) the cost of purification, storage, and distribution; (3) the interest of loaned capital; and (4), dividends fairly declared. Then there is the prospective increase of water rents, which depends upon the quantity of water available, upon the number of customers to be supplied, and especially upon the question of monopoly. The value of the property under competition would, as in other articles, depend upon the quality of the water, where the customers knew the difference between good water and bad, and would pay more for pure than for impure water; but the sellers of a necessary of life under a monopoly are not directly interested in any improvement in it involving expense; they get their own price or cut off the supply. And the London companies that draw their waters from the Thames, took no notice of the fact that the sewers—before 1832 and 1848—before the cholera destroyed the population by thousands, polluted their sources of supply; they got their rents. The recent great improvements were pressed on them from outside; and the supply of soft water under high pressure, available for extinguishing fires, was not instituted in London, but in Manchester and Glasgow. So far the London water companies enjoyed the privileges of a monopoly; and they have been protected from competition among themselves. But it would be unsafe to assume in the valuation, that if the population of London ever demands permission to supply itself with purer water, under high pressure, at the lowest possible cost, Parliament will refuse it the powers. To countenance monopoly is in opposition to all the traditions of Parliament. The most potent interests have succumbed to the principle of freedom of trade. Elizabeth herself, at the acme of her despotism, abandoned the monopolies she had rashly conceded; and the extinction of the last expiring embers of protection has been the glory of more than one administration. So in the valuation of the dividends of either gas or water companies, I do not conceive it would be safe to assume that the monopoly they enjoy will be for more than a limited number of years, or that they have any chance of realising on capital for ever 10 per cent., when great municipalities can raise the money for 4 per cent., and supply themselves at less cost with purer water and brighter light.

~~The evils of monopolies are denounced by Adam Smith,~~ and are described at their origin in England by Hume, its philosophic historian:—

> "Elizabeth granted her servants and courtiers patents for monopolies; and these patents they sold to others, who were thereby enabled to raise commodities to what price they pleased, and who put invincible restraints upon all commerce, industry, and emulation in the arts. It is astonishing to consider the number and importance of those commodities which were thus assigned over to patentees. Currants, salt, iron, powder . . . .
>
> "When this list was read in the House, a member cried, *'Is not bread in the number?' 'Bread!'* said every one with astonishment. *'Yes, I assure you,'* replied he, *'if affairs go on at this rate, we shall have bread reduced to a monopoly before next Parliament.'* [What would the Honourable Member have said to the addition of 'water?']
>
> "And while all domestic intercourse was thus restrained, lest any scope should remain for industry, almost every species of foreign commerce was confined to exclusive companies, who bought and sold at any price that *they themselves thought proper to offer or exact.*" Hume's "History of England." Elizabeth, 1601, cap. 44.

So it is with gas and water to-day, but how long will it last?

The accounts of water and other companies now published by the Board of Trade convey much useful information; but they may be put in a much more intelligible form, as I will endeavour to show by a table of the accounts of the New River Company (see Table X).

Canal Companies.

Water is an economic quantity of a peculiar quality: its fluidity ensures its transport from places where it is worthless to places where it has a price, at an inconceivably low cost. Thus one of our distinguished engineers, Mr. Bateman, has estimated the cost of carrying 300 million gallons—1,363,036 cubic metres—equivalent to nearly as many tons—from the mountains of Wales over 183 miles of country, and distributing it daily to 6 million people living in and around London, at less than a halfpenny a ton. The London water companies supply water at the rate of $1\frac{1}{4}$*d.* a ton. Water derived from mains constantly charged under high pressure, serves to extinguish fires, and besides conveys power that may be turned to productive account by hydraulic inventions. In the canal system the fluidity of water is turned to another account; it is not only easily transported itself, but it facilitates the transport of other bodies, on the single condition that it shall be confined in channels, and raised or depressed in level by locks.

Canals are subject to the same commercial vicissitudes as railways; and are valued on the same principles and by the same tables. The Regent's Canal paid less than 3*l.* on 100*l.* of capital in 1872, and $4\frac{3}{8}$*l.* in 1875. The Birmingham Canal paid 4 per cent. in the years 1872-75; and the shares were bought at the rate of 23·6 years' purchase. The 100*l.* of Leeds and Liverpool Canal shares in 1778 was worth 139*l.*; in 1800, 260*l.*; 1819, 400*l.*; 1837, 510*l.*; on an average of the years 1867-75, 446*l.*; in 1875, 389*l.* The railways have affected canal dividends; and the dividends of this canal which were 28 in 1868, were 18 in 1875.*

VII.—*Navigation and Dock Companies.*

Ocean Transport. Oceans and seas are the highways of the world. Sailing ships and steam vessels correspond to the railway rolling stock; the hotels here are afloat; the ports and docks are the stations and warehouses. There are eight great English steam navigation companies, in which large capitals are embarked. From 5 to 16 per cent. of dividends—or about 9 per cent. on an average —were paid in the years 1871-73; in 1875 the dividends suddenly declined to 7 in one case, *nil* in three, and only 4 on an average. The dividend of the Peninsular and Oriental Company ranged from 6 to 8 per cent., which sold at from thirteen to sixteen years' purchase in the seven years 1868-74; in 1875 the dividend fell to 3½, but then the shares sold at twenty-seven years' purchase, and this implied faith in the prospects of a rise in future years, which will probably be justified.† The General Steam Navigation Company, engaged in the home trade, returned a mean dividend of 11 per cent. 1870-75; and this was sold on the shares at sixteen or seventeen years' purchase. The value of the dividends of these companies varies, but the prices evidently range in the long run from thirteen to seventeen years' purchase; and they may be valued by 7 per cent. or 6 per cent. tables.

The great dock companies do not return high dividends; but they are well secured. Thus the dividend of the London and St. Katherine Dock, with its 6,000,000*l.* of stock, earned 3¼ per cent. dividend; which sold at nineteen years' purchase (61½*l.* for 100*l.* of stock in 1868-75). The Surrey Commercial Dock paid 5⅜ dividend; and the stock, 100*l.*, sold at 104*l.*, about 19·4 years' purchase, in the same period. They may be valued by a 5¼ per cent. table.

Irrigation Companies, Drainage Companies, Sewage Companies.

Water varies in value not only in different places but at different times. It is of incalculable value in the drought of summer; and the earth, like its inhabitants, requires its drink at intervals, through the seasons of the year. Without water the crops and the population may perish. Again thousands of tons of water fall on places where they are of no value, at times when they are not wanted, and in such torrents as to sweep away life and property. The rains of heaven in season are precious beyond conception; out of season they destroy the crops that in season they foster. Thus taken at various places and points of time the value of water goes through a series of changes; it passes from a *plus* through *zero* to a *negative* quantity. Hence irrigation companies have arisen, chiefly for distributing in regulated quantities the waters of rivers over cultivated land; and in some countries and states gigantic irrigation works are undertaken by the Government. According to Mr. Thornton, the Indian Government "have laid out 13 or 14 millions "sterling on irrigation," and have the intention of laying out "six "millions more during the next few years."* His corrected numbers make the profits all over India 1,020,000*l.* on 13,570,000*l.*, or on an average 7·5 per cent.; the profits varying from 4·5 to 39·7 per cent. in different parts of the empire. Though water is not wanted at all seasons, its canals, if properly constructed, can be used for the transport of vessels all the year through. That makes the works pay. Accordingly four successful irrigation works are called canals in India.

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* "Financial Register," 1876, p. 568.

† See "Financial Register," 1876; and Lindsay's "History of Merchant "Shipping," 1876.

On the banks of the Thames, in the Bedford Level, in Italy, and in Holland, there are, on the other hand, striking examples of values created by the removal of water. The value of irrigation even is not appreciated at once; and until it has been learnt the farmers and owners will not pay for it. Hence the slow progress of some irrigation companies. The same holds of drainage works; the expenditure is often slow in returning. But both these kinds of works, if judiciously planned, pay in the end. Drainage in England has been promoted by loans, but has generally been left to the enterprise of the landowners. Both irrigation and drainage admit of further economic development.

Drainage in towns artificially supplied with water, assumes the form of sewerage; but I am not aware that this has ever been undertaken successfully by a commercial company. Indispensable as it is, precious in promoting the removal of noxious matters, people who most want it will not readily pay for it, except under the compulsion of rates.

That the sewage of towns by skilful treatment may often be profitably placed on the land is certain. How to do it is a problem to be solved. How not to do it is proclaimed. We know that it offers on one hand the advantages of irrigation; and on the other distributes at a cheap rate, ammoniacal fertilising matter over prepared surfaces of land. But it may be noxious; and though it is produced it is not wanted every day. How to select suitable crops, how to place it in the best way on the best land, how to dispose of it when not wanted without danger, are the questions that engineers, farmers, and ingenious projectors will, we may confidently expect, answer successfully in the palmy days of new companies. Until then the valuation of their shares must be left in abeyance.

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* See paper by Mr. Thornton in "Society of Arts' Journal," 12th May, 1876.

VIII.—*Suez Canal.*

The company, founded to connect the Mediterranean with the Red Sea on the seaway between Europe, India, and China, owes its existence to the energy and genius of Ferdinand Lesseps. Its capital is in the form of 400,000 *twenty*-pound (500 frs.) shares, amounting in the aggregate to 8 million pounds.* The whole of the capital was subscribed; the society was constituted 5th December, 1858, the work was commenced at Port Saïd on 25th April, 1859;† the canal was opened on 17th November, 1869; and the concession is for ninety-nine years from that date. The British Government bought 176,602 shares, representing a capital of 3,532,040*l.*, for 3,976,582*l.* (or for 22·5*l.* a share), payable in December, 1875, and January, 1876, and thereby became entitled to the dividends payable on 1st January, 1895, and for the next seventy-three years. The price of the ordinary share, with all its coupons, is now 30*l.*; its par price being 20*l.*‡ The last dividend was at the rate of 5 per cent. per annum. The 100*l.* of ordinary capital is worth 150*l.* The coupons for the years to 1st January, 1895, but not inclusive, being detached, the Khedive undertakes to pay the interest on the 3,976,582*l.* until the first coupon of the English shares falls due.

The present value of 100*l.* of share capital being 150*l.*, it is evident that the purchasers of the shares expect the dividends to rise above 5 per cent.; and assuming that the rise will go on evenly from 5 per cent. in the year 1876 to 1895, the dividend will then be 9 per cent.§ The value of the 8,000,000*l.* of share capital is 12,000,000*l.*, which represents the value of the expected future dividends. Now the value of the dividends, on the assumption that the market value of the 223,398 shares is correct, is, up to 1st January, 1895, no less than 3,607,731*l.*, and the reversion of the after dividends is worth 3,094,209*l.* But the English Government has purchased the reversion of the dividends of 176,602 shares, and that, on the same grounds, is worth 2,446,111*l.*; leaving the value of the 198,829*l.* of interest payable annually by Egypt as the equivalent of the remaining 1,530,471*l.* Now the credit of Egypt being low, take a 10 per cent. table, and the annuity payable by Egypt for the term is worth 8·4 years' purchase, 1,670,164*l.** That makes the full value 4,116,275*l.*

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* 200,000,000 frs., the francs being converted into English £ by the factor $\cdot 04 = \frac{1}{25}$.

† See Memorandum by Lord Tenterden and Mr. Reilly, presented to Parliament in 1876, C. 1415; also Egypt, No. 1 (1876), Correspondence respecting purchase of Suez Canal Shares (C. 1391), with forms of shares.

‡ See "Investors' Manual," May, 1876. The market price of a 500 fr. share in Paris was 708·75; so 100*l.* was then worth 141·75*l.*

§ See note on page 499.

Thus at a cost of about 132,553*l.* a-year, England relieves Egypt of a debt which, if it had no other result, would, at only 10 per cent., have been a charge of 397,658*l.* a-year on that country; at the same time, allowing for some elements of risk in the 5 per cent. valuation, England becomes entitled, at the end of nineteen years, to 44 per cent. of the property and profits of the Suez Canal.

The debts on the canal are large, and for the greater part have been contracted in difficult circumstances on unfavourable terms. Thus four millions of money was borrowed in 1867 at 60*l.* of money for 100*l.* of debenture obligations, and this debt of 6,666,666*l.*, on which 5 per cent. interest is payable, is to be redeemed in fifty years by stipulated and increasing instalments. That is a prior charge. The whole of the debt, including arrears of interest at the date of the purchase, was said to be 9,026,666*l.*, making with the shares 17,026,666*l.* of capital engaged, on which 5 per cent., or 851,133*l.* a-year, is apparently payable out of the income remaining after (1) the payment of expenses of maintenance and working, the costs of administration, and generally all the charges of the society; (2) the interest and sinking fund for loans which may be contracted. As there is a sinking fund in all these loans that tells in favour of the reversioner by every year liberating the fund of charges for interest.

The 5 per cent. interest on 8 millions of capital is 400,000*l.* a-year. Now by a payment of 5·04025*l.* a-year, instead of 5·00000*l.* on every 100*l.* of capital, the capital itself is extinguished in ninety-nine years; so 402·5*l.* for every million pounds of capital, or 3,220*l.* for the 8 million pounds of capital, is devoted to the redemption of *one hundred and sixty-one shares annually.* For 3,220*l.*, accumulated at compound interest, supplied by the interest of the shares, amounts to the 8 million pounds in ninety-nine years. The shares to be redeemed are drawn by lot. The holders of shares redeemed preserve the same rights as the other shareholders, "with the "exception of the interest at 5 per cent. on the *capital* which has

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* The annual interest of the 3,976,582*l.* loan at 5 per cent. is 198,829*l.*, and such an annuity for nineteen years is, at 10 per cent. interest, worth 8·365 years' purchase. It is here assumed that the Chancellor of the Exchequer borrows the money at $3\frac{1}{3}$ per cent. When the 7 per cent. Egyptian stock sells at 40, it implies that 17·5 per cent. is the nominal rate of interest; the years' purchase of the perpetuity is then reduced to 5·7, and the Egyptian engagement is worth about 1,133,325*l.*

"been paid off to them." Thus the holder of 1,000*l.* in shares redeemed gets his 1,000*l.* down, and his due proportion ever afterwards of the "net proceeds" or profits in excess of 5 per cent. which is redeemed.

This form of sinking fund deserves the attention of municipal bodies and companies. It may be more attractive than the ordinary terminable annuities. (See table, p. 501.)

Value of Suez Canal Shares.

Owners of Shares.	Shares.	Proportion per 100 of the two Classes.	Par Value of Ordinary Shares.	Value of Share Capital at 150*l.** per 100*l.* (= 30*l.* per 20*l.* Share.)	Value of Interest and Dividends for 19 Years.	Value of Reversion up to 1969.
			£			
	400,000	100·00	8,000,000	12,000,000	6,459,680	5,540,320
French and other shareholders	223,398	55·85	4,467,960	6,701,940	3,607,731	3,094,209
(1) English Government on and after 1st Jan., 1875. (2) Holders of 120,000 delegations up to that date	176,602	44·15	3,532,040	5,298,060	2,851,949	2,446,111

* Note the value of the 20*l.* share was 30*l.* on May, 1876, after the last dividend of 5 per cent. per annum had been paid. Under the articles the shareholders are entitled to 5 per cent. per annum interest payable on 1st January and 1st July, and to whatever dividend there may be payable on 1st July of every year, after deduction of expenses and charges of various kind s.

The value of interest and dividends on a 100*l.* share for nineteen years is deduced from this equation: $C_{19} = 5w_1 + ey_{2\,|\,18} - (5 + 18e)w_{20}$. And the value of e is determined by the equation $C_{93} = 150 = 5w_{1\,|\,92} + ey_{2\,|\,18} - 18ew_{93}$; where it is assumed that the dividend is in the first year 5 per cent. and then increases by e, $2e$ . . . . to $18e$ in the nineteenth year. Thus

$$e = \frac{150 - 5w_{1\,|\,92}}{y_{2\,|\,18} - 18w_{93}} = \cdot 22253.$$

And the first dividend on 100*l.* of capital being 5*l.*, the nineteenth annual dividend is 9·006, or virtually 9 per cent. The value of the reversion of the 9 per cent. payable after 1969 is $9w_{93}$; so were it not for the limitation of the concession the value of the stock would be 152*l.* instead of 150*l.* Any other values of the share, or variation of term during which dividends will increase, may be tested by the tables. C_{19} and C_{93} represent the values of capital enjoyable for nineteen and ninety-three years; C_{93} being the market price.

Capital Engaged in the Suez Canal.

Form of Capital.	Date at which Redemption Begins.	Number of Shares.	Par Value of a Share.	Par Value of Total Shares.	Rate of Interest.	In how many Years Repayable.
			£	£		
1 Shares*	1870	400,000	20	8,000,000	5	99
2 Debentures† (Obligations)	1867	333,333	20	6,666,666	5	50
3 Loan, 1871 (Bons trentenaires)	1871	200,000	5	1,000,000	6·4	30
4 Interest on Shares in Arrear (Bonds—Titres)	1882	400,000	3·4	1,360,000	5	40

Form of Capital.	Redemption Years Expired in 1895.	Redeemed on 1st January, 1895.	Unredeemed on 1st January, 1895.	1st January, 1895. Proportion of Shares or Capital per Cent.	
				Redeemed.	Unredeemed.
		£	£		
1 Shares*	25	153,681	7,846,319	2	98
2 Debentures† (Obligations)	28	1,637,540‡	5,029,126	25	75
3 Loan, 1871 (Bons trentenaires)	24	577,900‡	422,100	58	42
4 Interest on Shares in Arrear (Bonds—Titres)	13	?	?	—	—

* On the shares 8,000,000*l.* were received when they were fully paid up; on the debentures 4,000,000*l.*; on the loan 800,000*l.*; making in the aggregate 12,800,000*l.* The bonds are for arrears of interest, amounting to 1,360,000*l.*; thus 14,160,000*l.* of money stands for 17,026,666 of capital in four forms. The delegations are not a general charge, they are issued in exchange for coupons on the English shares.

† The shares are redeemable by the sinking fund. The amount of money received for the debentures was 4,000,000*l.*, which was then the price of a perpetual annuity of 333,333*l.* Thus 100*l.* of money purchased 166⅔*l.* of stock, returning at 5 per cent. 8⅓ interest. While the 166⅔*l.* debenture stock is held by the purchaser, he realises 8⅓ per cent. for his 100*l.* of money; and if his debenture is redeemed, say in the first year, he still retains the power of getting the same revenue so long as he can invest his money at 5 per cent.

‡ The redemption up to 1st January, 1895, of the 5 per cent. debentures sets free 81,877*l.* of interest; of the loan of 1871 at 6·4 per cent., 36,986*l.*; or 118,863*l.* in the aggregate.

It is here assumed that the redemption of the shares began after 1st January, 1870; the canal having been opened in November, 1869. This was postponed to 1875, but the arrears will soon be redeemed.

Scheme showing the Operation of the Suez Canal Share Sinking Fund, Repaying the Share Capital Advanced in Ninety-Nine Years.

Year.	Share Capital Unredeemed. $S_x = S_0 - a\,S_0 R_x$	Share Capital Redeemed. $D_x = a\,S_0\,R_x$	Redeemed in the Year after x.
0	8,000,000	—	3,220
1	7,996,780	3,220	3,381
2	7,983,399	6,601	
19	7,901,664	98,336	8,136
20	7,893,528	106,472	
37	7,672,868	327,243	19,582
38	7,653,175	346,825	
49	7,361,066	638,934	35,167
50	7,325,900	674,101	
98	383,057	7,615,933	384,067
99	—	8,000,000	—

$r^1 = 1 + i$ if i = interest of 1*l.* in a-year
$R_x = r^0 + r^1 + r^2 + \dots + r^{x-1}$
Thus if $i = \cdot05$
$r^1 = 1\cdot05$
$R_0 = 0$; $R_1 = 1$
$R_2 = 2\cdot05 = 1 + 1\cdot05 = 1 + r^1$
$R_{19} = 30\cdot539$
$R_{99} = 2484\cdot78586$; and $\frac{1}{R_{99}} = a = \cdot00040245$
$S_0 = 8,000,000$
$aS_0 = 3220$

Note.—The table may be read thus: The share capital redeemed, that is repaid to the holders in nineteen years, is 98,336*l.*; in the twentieth year 8,136*l.* more capital, or 406 shares are redeemed; making the total sum redeemed, 106,472*l.*; unredeemed, 7,893,528*l.*

The shares now are of two descriptions: (*a*) the *shares unredeemed*, which are entitled to the full dividend, including 5 per cent. per annum *plus* any further profit of the canal, and (*b*) the *shares redeemed*, which are only entitled to the excess of dividend over 5 per cent., called interest. Now the proportion of shares redeemed on 1st January, 1895, should be about 2 per cent.; consequently, of the shares bought by England only about 173,070 will be entitled to the full dividend at and after 1895; the 3,532 being entitled only to the excess of dividend over 5 per cent.; but the capital repaid on the shares drawn after the date of purchase, and before 1895, will be about 131,779*l.*, and will properly belong to the English Government. Then there will be an influx of interest payable on debentures, but redeemed year by year by the respective sinking funds operating up to 1895.

The *sinking fund* of the Suez Canal and *terminable* annuities compared.

(1). The payment of 5·0402*l.* per cent., instead of 5*l.* per cent., extinguishes a debt of 100*l.* in a hundred years. Thus instead of paying 400,000*l.* of interest on 8 million pounds of debt by paying an annuity of 403,220*l.* for ninety-nine years, the debt is in that time repaid, inasmuch as 403,220*l.* a-year for ninety-nine years is of the same value as 400,000*l.* for ever. The amount of debt repaid increases every year: thus the debt and interest at the end of the first year amounts to 8,400,000*l.*; then deducting the annuity of

403,220*l.*, the capital is reduced to 7,996,780*l.*; the increase by interest is less, but the annuity is constant, and consequently, as from a decreasing quantity a constant quantity is deducted, the capital redeemed every year increases until the debt is extinguished. Thus at 5 per cent. the interest in a hundred years is equal in amount to five times the capital or to 40,000,000*l.*;* while the amount paid in the annuity is only 40,322,000*l.*; the difference paid annually, invested at compound interest, amounts to 8 million pounds in ninety-nine years. By this method the debt and interest are confounded, and cease at the same moment. The borrower at once ceases to pay, the creditor to receive, the 403,220*l.* a-year.

(2). By the other method the creditors are paid their interest, and a certain but increasing proportion of their capital every year. The shareholders receive their capital back in lump sums intact. Thus shareholders might receive their money back in the first year with interest for the year preceding. In the twentieth year 8,136*l.* would be repaid; in the ninety-ninth year 384,067*l.* All the time, up to the date of redemption, but not afterwards, shareholders receive the interest on their shares.

The finance of the Suez Canal was as bold and skilful as the engineering; for both, in spite of obstacles and difficulties, held by some to be insurmountable, were successful; such financial operations are, however, only justifiable in cases where success is certain. M. Lesseps, it will be seen, attracted small capitalists by undertaking to pay interest and to repay capital by lot from the first, before any revenue was realised; and he committed the company to repayments of capital and of loans, slow at first, it is true, but irrevocably; crowning the whole by leaving the canal free from any charge whatever for capital at the end of ninety-nine years after the opening. Then every share will have been repaid after having reaped its profit. The founders and administrators will enjoy their rewards so soon as the shareholders realise more in dividends than the interest of 5 per cent. on their capital. Had such a system been in operation in England, Hugh Myddelton would have been amply rewarded, and the New River would have been now the property of the people of London.

The following is an outline of the financial scheme. The capital was raised by shares, entitled to 5 per cent. interest from the first until the shares are repaid, and over this 5 per cent. of interest to any profits even after repayment during the whole period of the concession extending to 1969. Then rather more than the share capital figures as debentures and bonds, of which only some 60 per cent. was obtained in money. The income or annual proceeds are chiefly drawn by a tonnage charge on the transit of vessels, equivalent to 8*s.* a ton, and to a surtax of rather more than 2*s.*, subject to a reduction so soon as the net tonnage passing through the canal in a year exceeds 2,100,000. [A change in this term is now proposed.]

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* The amount paid in interest in 100 years when the rate of interest is at 3 per cent. is three times the capital, at 4 per cent. four times the capital, at 5 per cent. five times the capital, and so on.

Thus let I = annual revenue; and G = outgo: namely, for (*a*) maintenance, working, administration, general charges; (*b*) interest and sinking fund of loans; (*c*) interest of 5 per cent. on capital (the interest of redeemed shares goes to sinking fund); (*d*) sinking fund of 3,220*l.* per annum, 8,000,000 × ·0004025. Then of (I − G) so defined there is to be taken (*e*) = ·05 × (I − G) up to 200,000*l.* to be kept as reserve; and P = I − G − *e* = net proceeds or profits, to be thus distributed: ·15 P to Egyptian Government; ·10 × P to founders; ·02 P to administrators; ·02 P for pension fund; and ·71 P for shareholders (this is in addition to the 5 per cent. interest of their capital).

29th June.—From the report of M. Lesseps to the recent meeting, it appears that the income (I), including a small balance of 695*l.*, was 1,233,786*l.*; the outgo (G) 1,189,082*l.*; namely, under (*a*) 263,857*l.*; under (*b*) 522,005*l.*; under (*c*) 400,000*l.*; under (*d*) 3,220*l.*; under (*e*) 2,235*l.* Then there remained 42,468*l.*, of which 6,370*l.* went to the Egyptian Government, 4,247*l.* to the founders, 849*l.* to the administrative council, 849*l.* to the pension fund of the officers, and finally, 30,153*l.* to the shareholders. Thus the shareholders, in addition to 5 per cent. interest, got 0·377 out of the net profit for the year, or including both heads, 5·377 for 100*l.* of share capital. See further particulars in the full and clear accounts. The state of the work and the prospects of the canal are all declared to be in every way satisfactory.

The founders' part of the "net profits" is to that of the shareholders as 10 to 71; and as the founders' part is distributed in 1,000 *titres* as against 400,000 shares (*actions*), we have this relation between the *titre* and the share, the value of the whole net profits being expressed by P:

$$\frac{\cdot 10\,\mathrm{P}}{1000} = \frac{\cdot 71\,\mathrm{P}}{400000}\, x \mathrel{.\,\because} x = \frac{4000}{71} = 56{\cdot}33803.$$

And whatever the "net profits" P may be, the founders' *titre* is worth 56·3 times as much as the excess of the market value over the par value of the ordinary share. Thus if the *market* value of the share is 30*l.*, the *par* value 20*l.*, then 30 − 20 = 10; and 563*l.* is the value of a founder's *titre* or share as it is often called. This assumes that the excess over 5 per cent. of dividend is as well secured as the dividend of the share including the 5 per cent.

If the value of the 400,000 ordinary shares at 30*l.* be 12,000,000*l.*, then 4,000,000*l.* may be considered as the value of the net profits in excess of the stipulated 5 per cent. interest; and consequently the aggregate value of the founders' 1,000 shares is 563,338*l.* This is their value now; and as the values of ordinary shares will increase with the dividends, so will the founders' shares, but more rapidly. In 1858 the founders' shares were not worth—if success had been certain—234,000*l.*

M. Lesseps is worthy of his reward; he has won his honours in a glorious enterprise, by which the world will profit when the pyramids have crumbled into the sands of the desert.

IX.—*Gas Companies.*

"Since light so necessary is to life
And almost life itself,"

the production of sources yielding at will light during night of different degrees of brilliancy has kept pace with the progress of civilisation. In the savage state men slept in darkness; then came the small lamp, the rushlight, the dip candle, the wax candle, the sperm candle, the petroleum candle, the paraffin oil lamp, gaslight, the lime light, and the electric light. What other sources of light science may discover cannot be conjectured. Gas is now in possession of the field; it is manufactured on a large scale; and is distributed in iron pipes through the streets by great companies which have in London alone, according to the latest returns, 10,616,493*l.* of capital; yielding a revenue of 3,703,200*l.* against an expenditure of 2,767,274*l.*; thus leaving 935,926*l.* of annual profit.* Gas was first used in Watt's factory, at Soho, near Birmingham; and was gradually introduced into London by agencies, of which Mr. Harry Chubb gives an account in his able paper. Several competing companies were established, and their struggles continued down to the year 1857, when they came to terms, and each company enjoyed undisturbed possession of a district. This was recognised by the Gas Act of 1860. And the dividend of ordinary stock is now almost everywhere at its statutory limit of 10 per cent.; which is higher than the profit of the water companies, and than other commercial companies.

While the transport companies gain their profits by carrying persons and products unchanged to places where they want to go —or where they are wanted—gas has first to be manufactured by the distillation of coals, and to be purified by scientific processes, before advantage is taken of its elasticity to force it through tubes to the spot where its light is required. A complete transformation of the coal is effected in the heated retorts; and besides gas, coke and other valuable matters are produced. The plant consists of the ground, the premises, the reservoirs, the mains, and pipes: fittings and burners being provided by consumers. The price of coals, of labor, and of administration enter on one side of the account; the price of coke, of other products, and of gas rents on the other. Gas supply is a more elaborate work than water supply. But the manufacture is reduced to a simple process; and the gas rents, regulated by metres, are easily collected. The price is fixed by the company itself, and gaslight is now supplied under a regulated monopoly. The high rate collected is evidence of the facilities indirect offers over direct taxation.

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* See "Registrar-General's Annual Summary of London Weekly Tables," 1875: Spottiswoode.

It is understood that through the energetic action of the City of London and the Metropolitan Board of Works, in conjunction with the moderating efforts of the Board of Trade, some arrangement—at least temporary—has been come to for the advantage of the ratepayers of the metropolis in conformity with the views of the Committee over which Lord Cardwell presided in 1867.

There can be no doubt that now London has a Board of Works, that body could obtain capital at 4 per cent. to supply London on the best possible system with gas, and thus save the ratepayers 511,267*l.* a-year. The present prices are virtually monopoly prices; and Parliament would neither allow other companies to compete with the existing companies in their districts, nor the authorities to take the supply of gas out of their hands, without paying off the capital of the companies. Then some of the capital of the first companies paid no dividends for some years; and these might well *on that capital* be entitled to 10 per cent. in perpetuity; not so the capital of companies that at once entered into the ordinary commercial profit of 5 per cent. Each company and stock, in the event of the case of compensation arising, would have to be dealt with separately, on the principles already laid down. At present the dividends are 10 per cent.; the price of 100*l.* of share capital is 171*l.*; so the new investor pays seventeen years' purchase for his dividends, and realises 5·85 per cent. for his money. In valuing these shares it cannot be assumed that Parliament, which has abolished the monopolies of other powerful interests, has repealed among others, the navigation laws and the corn laws under which great capitals were embarked, will refuse the Metropolitan Board the power—if London cries out aloud—to supply them with the best gas at the cheapest rate possible.

I must reserve the discussion of bank dividends, of profits of patents, of mines, of business incomes, of firms to be converted into companies, of professional incomes, of rents and annuities, of life interests, and of the dividends of national debts, for another occasion. The tables will be found useful in dealing with the valuation of future and contingent profits involved in all such concerns.

PART II.

Description of Tables (I—V).

Let the annual interest of 1*l.* be i, and interest be convertible annually, then at compound interest $(1+i)^x =$ the amount of 1*l.* at interest for x years; and $\frac{1}{(1+i)^x} = v^x$, is called the present value of 1*l.* receivable at the end of x years.

Col. 1. x expresses the number of years the first payment is deferred.

Col. 2, headed v^x, shows the several values in table from v^0 up to v^{89}, when the interest is 5 per cent.; and from v^0 to v^{40}, when the interest is 3, 4, 6, 7 per cent.; the series is infinite, and as it is a decreasing geometrical progression, can be summed up.

Col. 3, headed w_x, is the sum of the series v^x from any term to the end, thus:—

$$\begin{aligned}
w_0 &= v^0 + v^1 + v^2 + v^3 + v^4 \;.\;.\;.\;.\;.\; + v^\infty \\
w_1 &= \qquad v^1 + v^2 + v^3 + v^4 \;.\;.\;.\;.\;.\; + v^\infty \\
w_2 &= \qquad\qquad v^2 + v^3 + v^4 \;.\;.\;.\;.\;.\; + v^\infty \\
w_3 &= \qquad\qquad\qquad v^3 + v^4 \;.\;.\;.\;.\;.\; + v^\infty \\
\text{And } w_x &= v^x + v^{x+1} + v^{x+2} + v^{x+3} \;.\;.\; + v^\infty
\end{aligned}$$

Col. 4. The series w_x can be summed upwards, and the sum is conveniently expressed by y_x; thus w_x is found by summing up to x the terms of v^x successively, and y_x by summing up to x the terms of w_x successively.

$$\begin{aligned}
\text{Thus } y_x &= w_x + w_{x+1} + w_{x+2} + w_{x+3} \;.\;.\;.\; w_\infty \\
&= 1v^x + 2v^{x+1} + 3v^{x+2} + 4v^{x+3} \;.\;.\;.\; \infty v^\infty
\end{aligned}$$

as is evident from the nature of the construction; or every term of w_x is found by dividing v^{x-1} by i; every term of y_x by dividing w_{x-1} by i.

For any term in the series, w_x and y_x, is immediately deducible from the preceding terms of v^x.

$$\text{Thus } w_x = \frac{v^x}{1-v} = \frac{v^{x-1}}{i}\,; \text{ since } \frac{1-v}{v} = i\,;$$

$$\text{and } y_x = w_1\,w_{x-1} = \frac{w_{x-1}}{i} = \frac{v^{x-2}}{i \times i}$$

Example: taking $i = {\cdot}05$ and $v = \frac{1}{1{\cdot}05}$,

$w_1 = \frac{1}{{\cdot}05} = 20 =$ the sum of the series $v^1 + v^2 + v^3 \ldots\ldots$ *ad infinitum.*

$$y_2 = \frac{1}{\cdot 05} \times \frac{1}{\cdot 05} = 400 = \text{the sum of the series } 1v^1 + 2v^2 + 3v^3 \ldots$$

ad infinitum.

Then $w_x - w_{x+n} = w_{x|n} = v^x + v^{x+1} + v^{n+2} + v^{x+n-1}$
$= \text{the sum of } n \text{ terms of the series } v^x$,

and $y_x - y_{x+n} = y_{x|n} = w_x + w_{x+1} + w_{x+2} + \ldots + w_{x+n-1}$
$= 1v^x + 2v^{x+1} + 3v^{x+2} \ldots + nv^{x+n-1} + nw_{x+n}$.

The $y_{x|n}$ expresses the value of annual dividends, the first payable at the end of x years, increasing as the arithmetical series 1, 2, 3, 4, up to n, and then remaining stationary at n in perpetuity.

$y_{x|n} - nw_{x+n} =$ is the value of all the dividends up to the nth inclusive.

This value changes with the assumed rates of interest; it increases as the rate of interest decreases.

The dividends where the values in col. y_x are applicable, are always taken to increase or to decrease in arithmetical progression, but they may be any quantities.

Thus let the first increasing annual dividend be e, payable at the end of x years, the second $2e$, the third $3e$, and so on up to ne; and the first decreasing annual dividend, payable at the end of z years, be f, the second $2f$, the third $3f$, and so to mf; then the value of the dividend will be thus found by the tables from this formula $ey_{x|n} - fy_{z|m} =$ the present value of such deferred increasing and decreasing dividends and of the residual dividend in perpetuity; the said value being either positive or negative.

Now let C express a capital sum payable at any time, d an annual dividend, e the first of a series of annual dividends increasing in arithmetical progression; then we have as a general equation $Cv - dw_x - ey_x = 0$.

(1.) $C = dw_x =$ value of a fixed dividend of d to commence at end of x years.

Thus, using the 5 per cent. tables, the value of an annual dividend of 5*l.* on 100*l.* share is found to be—

$$C = dw_1 = 5 \times 20\cdot 000 = 100.$$

This is the interest of 100*l.* multiplied by the number of years' purchase, as it is technically called.

If the first dividend is payable in five years—
$d \times w_5 \, (= 5 \times 16\cdot 454 = 82\cdot 270)$ is the value of the dividend so payable.

And to get 5 per cent. for $C = 100$, the dividend first payment at end of x years is found by the equation $d = \frac{C}{w_x}$.

Thus $d = \frac{C}{w_5} = \frac{100}{16{\cdot}454} = 6{\cdot}1$.

The investor's unpaid dividend under this hypothesis accumulates at compound interest for n years, and creates *new capital* (22*l.*), which yields the excess of dividend over 5*l.* on 100*l.* of stock.

(2.) $C = d\,(w_x - w_{x+n}) = d \times w_{x\,|\,n} =$ value of n annual dividends first payable at end of x years.

Thus $5 \times w_{1\,|\,5} = (20{\cdot}000 - 16{\cdot}454)5 = 5 \times 3{\cdot}546 = 17{\cdot}730$.

Then as $d = \frac{C}{w_{x\,|\,n}}$, the dividend of 100*l.*, payable for five years, is thus found to be $d = \frac{100}{w_{1\,|\,5}} = \frac{100}{3{\cdot}546} = 28{\cdot}201$, which in five years repays *capital* and 5 *per cent. interest* on all of it that remains under investment.

(3.) If it be assumed that there is no fixed dividend, then $d = 0$ and $C = ey_{x\,|\,n}$.

If it be assumed that there will be no dividend for five years, and that at the end of six years the first dividend will be e, the second $2e$, up to $10e$, at which the dividend remains in perpetuity, the value of $C = e(y_6 - y_{16}) = ey_{6\,|\,10} = e(329{\cdot}08 - 202{\cdot}03)$ by the 5 per cent. tables.

And if $e = 1$*l.*, the value of these dividends is by the 5 per cent. table 127·05*l.*

The first fourteen dividends of 1*l.*, payable at end of each year, are worth 9·899; and the fifteenth, with all the dividends due ever afterwards in perpetuity, are worth 10·101: consequently 100*l.* of stock of a concern (A) yielding an annual dividend of 10·102*l.* for fourteen years and then ceasing, or another (B) yielding a first dividend of 9·900*l.* at the end of fifteen years, and the same dividend ever afterwards, will be nearly of the same value as 100*l.* stock of a concern (C) yielding a dividend of 5*l.* a-year from the first in perpetuity.

The Turkish 6 per cent. of 200,000,000*l.*, selling at about 20*l.* for 100*l.* of stock in March last, would repay the investor his capital and 5 per cent. interest if the Sultan should succeed in paying only four annual dividends.

Let the price of 1*l.* of stock be p, and the annual dividend be 6*l.*, then $\frac{6 \times 100}{p} = \frac{6 \times 100}{20} = 30$; which exceeds 28·19*l.*, the dividend for four years required to pay interest and repay capital.

A dividend (d) assumed to be stationary for the first a years, declining regularly in arithmetical progression for the next b years, then increasing regularly for c years, and then stationary ever afterwards, is thus valued :—

$$C_0 = dw_1 - \beta y_{a\,|\,b} + \gamma y_{a+b\,|\,c}.$$

The final fixed dividend becomes :—

$$\delta = d - \beta b + \gamma c.$$

Thus if $d = 6$; $\beta = {\cdot}4$; $\gamma = {\cdot}5$; $b = 5$; $c = 6$, the final dividend is 7.

The equation may be obviously modified to meet many combinations of stationary, increasing, decreasing, or terminating dividends at variable intervals of time.

As dividends are derived from capital, their variation depends upon the amount and the various conditions in which that capital is engaged. Thus the capital (C) may be in the state of (S) stock or paid-up shares on which dividends are payable; (R) reserve; (P) preferential stock; (D) debenture stock; (L) loans, bonds, debentures, deposits, bank notes in circulation; (H) houses, land, plant, rented or let. The capital engaged in a concern and valued in money may be then represented in an equation :—

$$C = S + R + P + D + L + H.$$

The interest of P, L, and the rents of H are included in the outgo, and are to be deducted from revenue k to obtain divisible profit to be distributed over $(S + R) - R$.

Besides the capital of shares paid up, there is in some concerns capital uncalled up, and where, as in some banks, there is unlimited liability, the whole fortune of the shareholders is a kind of reserve on which the concern to some extent trades. On the 100*l.* of stock or of shares paid up the dividend is most conveniently expressed like interest at an annual rate.

Two concerns may have the same amount of capital engaged, and yet the value of the assets of the shareholders may be very different; for of two railways, for example, one may have expended twice as much capital as the other on the same amount of line, and the value of the lines open for traffic is more accurately expressed by the estimated cost of producing them as they stand at the time of valuation than at the date of their production. The stock may be at par, at a premium, or at a discount.

The various assets (A), for the purpose of valuation, may be thus indicated by their respective money values :—

A = value of fixed plant or immovables + working stock + cash + bills receivable for short terms + debts due + convertible securities + shares in other concerns + goodwill, and so on.

The liabilities (L) may be expressed under different heads, appropriate to each kind of concern, and may be considered as debts of the concern to its creditors. Thus A − L = the value of the concern.

We have, in considering the dividend and its probable variations, to consider mainly the state of the capital, the maintenance of its working instruments, the annual income (k) from different sources and the outgo (g) in its various channels, assuming that the plant and working stock are *maintained in the same state of efficiency;* then for a given year, $d = k - g - r$, where r is the rest or balance carried over to the reserve.

And it is evident that as k may be stationary, increase, or decrease, so may g, and that both may be moving in opposite directions. If both increase to the same extent, d will be constant, and if both increase in the same ratio—say both are doubled—then the dividend will be doubled, for $2d = 2k - 2g$. Then if k increases and g is stationary or decreases, the dividend will increase; or if the reverse takes place, the dividend will decline and may fall to zero.

Thus if it be considered desirable to value the k and g separately rather than their difference, the tables and the formulæ given for the dividend are applicable to the valuation of k and g as independent quantities; and which the study of the facts—such as the traffic returns, the varying prices of coals and of wages—may suggest to the expert valuer.

Dividends Increasing in Geometrical Progression.

Such dividends are valued as annuities are valued. Thus let the original dividend of 1*l.* become $1 + e$ at the end of one year, and $(1 + e)^n$ at the end of n years, then if the increase go on according to the same law *ad infinitum*, the value C of the future dividends will be expressed by the series:—

$$C = d\left\{\left(\frac{1+e}{1+i}\right)^1 + \left(\frac{1+e}{1+i}\right)^2 + \left(\frac{1+e}{1+i}\right)^3 + \left(\frac{1+e}{1+i}\right)^n \ldots\right.$$

Now let the rate of interest be 5 per cent. and the $1 + e = \frac{1\cdot05}{1\cdot04}$, then if $d = 1$ be at end of first year $d\left(\frac{1\cdot05}{1\cdot04}\right)$ and so successively,

$$C = \frac{1\cdot05}{1\cdot04} \times \frac{1}{1\cdot05} + \frac{(1\cdot05)^2}{(1\cdot04)^2} \times \frac{1}{(1\cdot05)^2} + \frac{(1\cdot05)^n}{(1\cdot04)^n} \times \frac{1}{(1\cdot05)^n}$$

$$= \frac{1}{1\cdot04} + \left(\frac{1}{1\cdot04}\right)^2 + \left(\frac{1}{1\cdot04}\right)^3 + \left(\frac{1}{1\cdot04}\right)^4 \ldots = 25.$$

Thus the dividend which if it had remained stationary would have been worth only twenty, becomes, by reason of its increasing tendency, worth twenty-five years' purchase.

Now conversely let the *decreasing rate of dividend* be expressed by the powers of $\frac{1\cdot04}{1\cdot05}$ and reckoning interest at 4 per cent. $v^1 = \frac{1}{1\cdot04}$, then the dividend which if stationary would be worth twenty-five years' purchase falls to twenty years' purchase.

Thus the values of dividends assumed to increase or decrease in geometrical progression can always—when $(1+e)\frac{1}{1+i}$ is less than unity—be summed up, and be expressed by tables of the form v^n and w_n by taking the appropriate rate of interest; so let $1+e=\frac{1\cdot06}{1\cdot04}$, then $\frac{1\cdot06}{1\cdot04}\times\frac{1}{1\cdot06}=v=\frac{1}{1\cdot04}$. The stationary dividend which valued by a 6 per cent. table is worth $\frac{100}{6}=16\frac{2}{3}$ years' purchase, becomes by reason of its increase worth 25 years' purchase.

Value of Dividends at Determinable Risks.

There is a relation between the value of dividends decreasing in geometrical progression and the value of dividends exposed to the same annual risk of loss. Thus let the probability that 1*l.* will be paid at the end of a year be the fraction c, certainty being 1, then $1-c=f$, equal the chance of failure. So the chance c remaining the same, the probability of receiving the second dividend will be c^2, the nth dividend will be c^n. Now if $c=\frac{1\cdot05}{1\cdot07}$ and if $v=\frac{1}{1\cdot05}$, the value of the nth dividend of 1*l.* will be expressed by

$$\frac{(1\cdot05)^n}{(1\cdot07)^n}\times\frac{1}{(1\cdot05)^n}=\frac{1}{(1\cdot07)^n}.$$

So instead of being worth twenty years' purchase the dividend will be worth $\frac{1}{\cdot07}=14\frac{2}{7}$ years' purchase.

The value of dividends at risk—treated as annuities—can be valued by the tables, assuming rates of interest sufficiently high to cover the risk. Thus in the above example the chance of failure being taken at $\frac{0\cdot02}{1\cdot07}$ and of success as $\frac{1\cdot05}{1\cdot07}$ that is, the chances of failure against the chances of success will be equal to 2 to 105, and the value of the dividend 1*l.*—the annuity in perpetuity, will be reduced from $\frac{1}{\cdot05}$ to $\frac{1}{\cdot07}$; from 20 to $14\frac{2}{7}$. Hence in commercial transactions the risk is conveniently reckoned in the rate of interest or discount. (*See Introduction to English Life Table.*)

Value of Dividends at Varying Risks.

Thus let 1*l.* depend on a given life at any age *living* one year—or *dying* in a year—then these values are shown by life tables; and so are the sums of the present values of 1*l.* to be received on the same conditions and at any rate of interest, at the end of every year of life. These values are the values of life annuities of 1*l.*, or of 1*l.* payable at death. The probability of living 1, 2, 3, 4, or any number of years after puberty declines at varying rates; but as they are known their aggregate value is determinable with great accuracy on the large scale for insurance purposes.

It is convenient for some purposes of estimate to assume that the chances of annual payment will decline according to some law every year, and to determine the value of dividends dependent on such contingencies. A table struck out by the genius of Demoure is applicable to determine the value of the dividends on stocks of certain Governments of bad credit. Thus let the probability at a given date that they will pay the first year's dividend be expressed by $\frac{9}{10}$, the probability that they will pay the second year's dividend by $\frac{8}{10}$; the third and subsequent dividends by $\frac{7}{10}$, $\frac{6}{10}$, $\frac{5}{10}$, $\frac{4}{10}$, and so on to $\frac{1}{10}$ and $\frac{0}{10}$; then the value of every 1*l.* of such dividends will be

$$C = v^1\frac{9}{10} + v^2\frac{8}{10} + v^3\frac{7}{10} + v^4\frac{6}{10} + v^5\frac{5}{10} + v^6\frac{4}{10}$$

$$+ v^7\frac{3}{10} + v^8\frac{2}{10} + v^9\frac{1}{10} + v^{10}\frac{0}{10}.$$

If $v = \frac{1}{1 \cdot 05}$, then $C = 3 \cdot 784$ is the mathematical value of such dividends.

And if a table of the form exists

$$C = \frac{1}{n}\left\{v(n-1) + v^2(n-2) + v^3(n-3) + v^4(n-4) \ldots v^n(n-n)\right\},$$

it can be commonly used, or these values can be readily deduced from the combination of the values w_x and y_x.

PART III.

VALUATION TABLES.

TABLES I *and* II *of the* VALUES (v^x) *of* 1*l*., *Payable at the End of every* x *Years;* (w_x) *of an* ANNUITY *of* 1*l*., *First Payment at the End of* x *Years, and ever after in Perpetuity;* (y_x) *of an* ASCENDING ANNUITY, *First Payment of* 1*l*. *at the End of* x *Years, then Rising to* 2*l*., 3*l*., 4*l*., *and so on in Arithmetical Progression by Increments of* 1*l*. *ad infinitum.*

x	INTEREST 3 PER CENT.			INTEREST 4 PER CENT.		
	v^x	w_x	y_x	v^x	w_x	y_x
0	1·000000	34·333	1178·78	1·000000	26·000	676·00
1	·970874	33·333	1144·44	·961538	25·000	650·00
2	·942596	32·362	1111·11	·924556	24·038	625·00
3	·915142	31·420	1078·75	·888996	23·114	600·96
4	·888487	30·505	1047·33	·854804	22·225	577·85
5	·862609	29·616	1016·82	·821927	21·370	555·62
6	·837484	28·754	987·21	·790315	20·548	534·25
7	·813092	27·916	958·45	·759918	19·758	513·70
8	·789409	27·103	930·54	·730690	18·998	493·95
9	·766417	26·314	903·44	·702587	18·267	474·95
10	·744094	25·547	877·12	·675564	17·565	456·68
11	·722421	24·803	851·57	·649581	16·889	439·12
12	·701380	24·081	826·77	·624597	16·240	422·23
13	·680951	23·379	802·69	·600574	15·615	405·99
14	·661118	22·698	779·31	·577475	15·014	390·37
15	·641862	22·037	756·61	·555265	14·437	375·36
16	·623167	21·395	734·58	·533908	13·882	360·92
17	·605016	20·772	713·18	·513373	13·348	347·04
18	·587395	20·167	692·41	·493628	12·834	333·69
19	·570286	19·580	672·24	·474642	12·341	320·86
20	·553676	19·010	652·66	·456387	11·866	308·52
21	·537549	18·456	633·65	·438834	11·410	296·65
22	·521893	17·918	615·20	·421955	10·971	285·24
23	·506692	17·396	597·28	·405726	10·549	274·27
24	·491934	16·890	579·88	·390121	10·143	263·72
25	·477606	16·398	562·99	·375117	9·753	253·58
26	·463695	15·920	546·59	·360689	9·378	243·83
27	·450189	15·457	530·67	·346817	9·017	234·45
28	·437077	15·006	515·22	·333477	8·670	225·43
29	·424346	14·569	500·21	·320651	8·337	216·76
30	·411987	14·145	485·64	·308319	8·016	208·42
31	·399987	13·733	471·50	·296460	7·708	200·41
32	·388337	13·333	457·76	·285058	7·412	192·70
33	·377026	12·945	444·43	·274094	7·126	185·29
34	·366045	12·568	431·49	·263552	6·852	178·16
35	·355383	12·202	418·92	·253415	6·589	171·31
36	·345032	11·846	406·72	·243669	6·335	16·472
37	·334983	11·501	394·87	·234297	6·092	158·38
38	·325226	11·166	383·37	·225285	5·857	152·29
39	·315754	10·841	372·20	·216621	5·632	146·44
40	·306557	10·525	361·36	·208289	5·416	140·80

$$v^x = \left(\frac{1}{1+i}\right)^x = \left(\frac{1}{1+\cdot 03}\right)^x; \quad w_x = \frac{v^x}{1-v} = \frac{v^{x-1}}{\cdot 03}; \quad y_x = \frac{w_{x-1}}{\cdot 03} = \frac{v^{x-2}}{\cdot 03 \times \cdot 03}.$$

Table I may be read thus:—Reckoning interest at 3 per cent.

The present value of 1*l*. to be received at end of twenty years is v^{20} = ·553676.

,, an annuity of 1*l*. commencing at the end of twenty years is w_{20} = 19·010.

,, ,, commencing at the end of twenty years and ascending from 1*l*. to 2*l*., 3*l*., 4*l*., and so on *ad infinitum*, is y_{20} } = 652·66

VALUATION TABLE.

TABLE III *of the* VALUE (v^x) *of* 1*l.*, *Payable at the End of every* x *Years;* (w_x) *of an* ANNUITY *of* 1*l.*, *First Payment at the End of* x *Years, and ever after in Perpetuity;* (y_x) *of an* ASCENDING ANNUITY, *First Payment of* 1*l. at the End of* x *Years, then Rising to* 2*l.*, 3*l.*, 4*l.*, *and so on in Arithmetical Progression by Increments of* 1*l. ad infinitum.*

INTEREST 5 PER CENT.

x	v^x	w_x	y_x	x	v^x	w_x	y_x
0....	1·000000	21·000	441·00	45	·111297	2·337	49·08
1....	·952381	20·000	420·00	46	·105997	2·226	46·74
2....	·907029	19·048	400·00	47	·100949	2·120	44·52
3....	·863838	18·141	380·95	48	·096142	2·019	42·40
4....	·822702	17·277	362·81	49	·091564	1·923	40·38
5....	·783526	16·454	345·53	50	·087204	1·831	38·46
6....	·746215	15·671	329·08	51	·083051	1·744	36·62
7....	·710681	14·924	313·41	52	·079096	1·661	34·88
8....	·676839	14·214	298·49	53	·075330	1·582	33·22
9....	·644609	13·537	284·27	54	·071743	1·507	31·64
10....	·613913	12·892	270·73	55 ...	·068326	1·435	30·13
11....	·584679	12·278	257·84	56	·065073	1·367	28·70
12....	·556837	11·694	245·56	57	·061974	1·301	27·33
13....	·530321	11·137	233·87	58	·059023	1·239	26·03
14....	·505068	10·606	222·73	59	·056212	1·180	24·79
15....	·481017	10·101	212·13	60	·053536	1·124	23·61
16....	·458112	9·620	202·03	61	·050986	1·071	22·48
17....	·436297	9·162	192·41	62	·048558	1·020	21·41
18....	·415521	8·726	183·24	63	·046246	·971	20·39
19....	·395734	8·310	174·52	64	·044044	·925	19·42
20....	·376889	7·915	166·21	65	·041946	·881	18·50
21....	·358942	7·538	158·29	66	·039949	·839	17·62
22....	·341850	7·179	150·75	67	·038047	·799	16·78
23....	·325571	6·837	143·58	68	·036235	·761	15·98
24....	·310068	6·511	136·74	69	·034509	·725	15·22
25....	·295303	6·201	130·23	70	·032866	·690	14·49
26....	·281241	5·906	124·03	71	·031301	·657	13·80
27....	·267848	5·625	118·12	72	·029811	·626	13·15
28....	·255094	5·357	112·50	73	·028391	·596	12·52
29....	·242946	5·102	107·14	74	·027039	·568	11·92
30....	·231377	4·859	102·04	75	·025752	·541	11·36
31....	·220359	4·628	97·18	76	·024525	·515	10·81
32....	·209866	4·407	92·55	77	·023357	·491	10·30
33....	·199873	4·197	88·14	78	·022245	·467	9·81
34....	·190355	3·997	83·95	79	·021186	·445	9·34
35....	·181290	3·807	79·95	80	·020177	·424	8·90
36....	·172657	3·626	76·14	81	·019216	·404	8·47
37....	·164436	3·453	72·51	82	·018301	·384	8·07
38....	·156605	3·289	69·06	83	·017430	·366	7·69
39....	·149148	3·132	65·77	84	·016600	·349	7·32
40....	·142046	2·983	62·64	85	·015809	·332	6·97
41....	·135282	2·841	59·66	86	·015056	·316	6·64
42....	·128840	2·706	56·82	87	·014339	·301	6·32
43....	·122704	2·577	54·11	88	·013657	·287	6·02
44....	·116861	2·454	51·53	89	·013006	·272	5·73

VALUATION TABLES.

TABLES IV *and* V *of the* VALUES (v^x) *of* 1*l*., *Payable at the End of every* x *Years;* (w_x) *of an* ANNUITY *of* 1*l*., *First Payment at the End of* x *Years, and ever after in Perpetuity;* (y_x) *of an* ASCENDING ANNUITY, *First Payment of* 1*l*. *at the End of* x *Years, then Rising to* 2*l*., 3*l*., 4*l*., *and so on in Arithmetical Progression by Increments of* 1*l*. *ad infinitum.*

x	INTEREST 6 PER CENT.			INTEREST 7 PER CENT.		
	v^x	w_x	y_x	v^x	w_x	y_x
0	1·000000	17·667	312·11	1·000000	15·286	233·65
1	·943396	16·667	294·44	·934579	14·286	218·37
2	·889996	15·723	277·78	·873439	13·351	204·08
3	·839619	14·833	262·05	·816298	12·478	190·73
4	·792094	13·994	247·22	·762895	11·661	178·25
5	·747258	13·202	233·23	·712986	10·899	166·59
6	·704961	12·454	220·03	·666342	10·186	155·69
7	·665057	11·749	207·57	·622750	9·519	145·51
8	·627412	11·084	195·82	·582009	8·896	135·99
9	·591898	10·457	184·74	·543934	8·314	127·09
10	·558395	9·865	174·28	·508349	7·770	118·78
11	·526788	9·307	164·42	·475093	7·262	111·01
12	·496969	8·780	155·11	·444012	6·787	103·74
13	·468839	8·283	146·33	·414964	6·343	96·96
14	·442301	7·814	138·05	·387817	5·928	90·61
15	·417265	7·372	130·23	·362446	5·540	84·69
16	·393646	6·954	122·86	·338735	5·178	79·15
17	·371364	6·561	115·91	·316574	4·839	73·97
18	·350344	6·189	109·35	·295864	4·522	69·13
19	·330513	5·839	103·16	·276508	4·227	64·61
20	·311805	5·509	97·32	·258419	3·950	60·38
21	·294155	5·197	91·81	·241513	3·692	56·43
22	·277505	4·903	86·61	·225713	3·450	52·74
23	·261797	4·625	81·71	·210947	3·224	49·29
24	·246979	4·363	77·08	·197147	3·014	46·06
25	·232999	4·116	72·72	·184249	2·816	43·05
26	·219810	3·883	68·61	·172195	2·632	40·23
27	·207368	3·664	64·72	·160930	2·460	37·60
28	·195630	3·456	61·06	·150402	2·299	35·14
29	·184557	3·261	57·60	·140563	2·149	32·84
30	·174110	3·076	54·34	·131367	2·008	30·69
31	·164255	2·902	51·27	·122773	1·877	28·69
32	·154957	2·738	48·36	·114741	1·754	26·81
33	·146186	2·583	45·63	·107235	1·639	25·06
34	·137912	2·436	43·04	·100219	1·532	23·42
35	·130105	2·299	40·61	·093663	1·432	21·88
36	·122741	2·168	38·31	·087535	1·338	20·45
37	·115793	2·046	36·14	·081809	1·251	19·11
38	·109239	1·930	34·09	·076457	1·169	17·86
39	·103056	1·821	32·16	·071455	1·092	16·70
40	·097222	1·718	30·34	·066780	1·021	15·60

$$v^x = \left(\frac{1}{1+i}\right)^x = \left(\frac{1}{1+\cdot06}\right)^x;\ w_x = \frac{v^x}{1-v} = \frac{v^{x-1}}{\cdot06};\ y_x = \frac{w_{x-1}}{\cdot06} = \frac{v^{x-2}}{\cdot06\times\cdot06}.$$

Table IV may be read thus:—Reckoning interest at 6 per cent.

The present value of 1*l*. to be received at the end of twenty years is v^{20} = ·311805.

" an annuity of 1*l*. commencing at the end of twenty years is w_{20} = 5·509.

" " commencing at the end of twenty years, and ascending from 1*l*. to 2*l*., 3*l*., 4*l*., and so on *ad infinitum*, is y_{20} = 97·32.

RAILWAYS.

TABLE VI.—*London and North-Western Railway Half-Yearly Dividends per Cent. per Annum, Declared in the Years* 1838-75 ; *Quoted Highest and Lowest Prices of Stock* 1844-75.

Half-Years.		Dividend per Cent. per Annum.	Highest and Lowest Price of 100*l.* Stock in the Year.	Half-Years.		Dividend per Cent. per Annum.	Highest and Lowest Price of 100*l.* Stock in the Year.	Half-Years.		Dividend per Cent. per Annum.	Highest and Lowest Price of 100*l.* Stock in the Year.
1838	1st	—*	—	1851	1st	$5\frac{1}{2}$	H. 135	1864	1st	$5\frac{3}{4}$	H. $122\frac{5}{8}$
	2nd	7	—		2nd	6	L. 111		2nd	7	L. 106
1839	1st	7	—	1852	1st	$5\frac{1}{2}$	H. $135\frac{1}{4}$	1865	1st	6	$127\frac{3}{4}$
	2nd	8	—		2nd	5	L. $114\frac{1}{4}$		2nd	$7\frac{1}{4}$	$114\frac{5}{8}$
1840	1st	8	—	1853	1st	5	H. $126\frac{1}{2}$	1866	1st	6	$127\frac{3}{4}$
	2nd	8	—		2nd	5	L. 98		2nd	$6\frac{3}{4}$	$112\frac{3}{4}$
1841	1st	$8\frac{1}{2}$	—	1854	1st	5	H. 105	1867	1st	$5\frac{1}{4}$	$125\frac{1}{4}$
	2nd	$9\frac{1}{2}$	—		2nd	5	L. 92		2nd	$6\frac{3}{4}$	$108\frac{1}{2}$
1842	1st	10	—	1855	1st	$4\frac{3}{4}$	H. $104\frac{3}{4}$	1868	1st	$5\frac{1}{4}$	$120\frac{1}{2}$
	2nd	10	—		2nd	$5\frac{1}{4}$	L. $90\frac{1}{2}$		2nd	$6\frac{3}{4}$	111
1843	1st	10	—	1856	1st	5	H. 110	1869	1st	$5\frac{1}{2}$	$123\frac{7}{8}$
	2nd	10	—		2nd	6	L. $93\frac{1}{8}$		2nd	7	112
1844	1st	10	H. 246	1857	1st	5	H. $109\frac{3}{4}$	1870	1st	6	$132\frac{1}{8}$
	2nd	10	L. 211		2nd	5	L. $92\frac{1}{2}$		2nd	$7\frac{1}{4}$	119
1845	1st	10	H. 254	1858	1st	$3\frac{3}{4}$	H. $102\frac{3}{4}$	1871	1st	$6\frac{3}{4}$	$158\frac{5}{8}$
	2nd	10	L. 204		2nd	$4\frac{1}{4}$	L. $87\frac{1}{2}$		2nd	$8\frac{3}{4}$	126
1846	1st	10	H. 235	1859	1st	$4\frac{1}{4}$	H. $99\frac{1}{4}$	1872	1st	7	$160\frac{1}{2}$
	2nd	10	L. 190		2nd	$5\frac{1}{4}$	L. 83		2nd	$8\frac{1}{2}$	$141\frac{7}{8}$
1847	1st	9	H. 202	1860	1st	5	H. $105\frac{3}{4}$	1873	1st	7	156
	2nd	8	L. $138\frac{1}{2}$		2nd	$5\frac{1}{4}$	L. $96\frac{1}{2}$		2nd	8	$139\frac{7}{8}$
1848	1st	7	H. 155	1861	1st	$3\frac{3}{4}$	H. 102	1874	1st	$6\frac{1}{2}$	$155\frac{1}{2}$
	2nd	7	L. 99		2nd	$4\frac{3}{4}$	L. $90\frac{3}{4}$		2nd	$7\frac{1}{4}$	$143\frac{1}{4}$
1849	1st	7	H. 143	1862	1st	$3\frac{3}{4}$	H. $97\frac{1}{2}$	1875	1st	$6\frac{1}{4}$	$151\frac{7}{8}$
	2nd	5	L. $104\frac{3}{4}$		2nd	$5\frac{1}{2}$	L. 92		2nd	$7\frac{1}{4}$	$140\frac{3}{8}$
1850	1st	5	H. $128\frac{1}{2}$	1863	1st	$4\frac{1}{4}$	H. $108\frac{3}{4}$				
	2nd	$5\frac{1}{2}$	L $99\frac{1}{2}$		2nd	6	L. $96\frac{1}{4}$				

* The return for the eight years 1838-45, refers to the London and Birmingham Railway, which comprised only about one-half of the London and North-Western as incorporated by the Act of 1846. The rates of dividend have been kindly revised by Mr. Reay, the secretary of the London and North-Western Railway. The quotations of price have been supplied by Mr. Boulton, of the Stock Exchange, and kindly revised by Mr. M. Slaughter, in whose valuable work full information about the financial position of railways down to 1873 is to be found.

TABLE VII.—*London and North-Western Railway*, 1838-75. *Dividends and Price of Stock.*

Years.	Annual Rate of Dividend per 100*l*. Stock.			Prices of Stock in Market.				Value of Stock Calculated from Future Dividends.	Excess or Defect of Quoted Prices over Values of Future Dividends.
	First Half-Year.	Second Half-Year.	Mean Annual.	Highest.	Lowest.	Half Difference of Highest and Lowest.	Mean.		
1838	—	7	—	—	—	—	—	—	—
'39	7	8	7½	—	—	—	—	141·6	—
'40	8	8	8	—	—	—	—	141·2	—
'41	8½	9½	9	—	—	—	—	140·2	—
'42	10	10	10	—	—	—	—	138·3	—
'43	10	10	10	—	—	—	—	135·2	—
'44	10	10	10	246	211	17½	228½	131·9	+ 96·6
1845	10	10	10	254	204	25	229	128·5	+ 100·5
'46	10	10	10	235	190	22½	212½	125·0	+ 87·5
'47	9	8	8½	202	138½	31¾	170¼	121·2	+ 49·1
'48	7	7	7	155	99	28	127	118·8	+ 8·2
'49	7	5	6	143	104¾	19⅛	123⅞	117·7	+ 6·2
1850	5	5½	5¼	128½	99½	14½	114	117·6	− 3·6
'51	5½	6	5¾	135	111	12	123	118·2	+ 4·8
'52	5½	5	5¼	135¼	114¼	10½	124¾	118·4	+ 6·4
'53	5	5	5	126½	98	14¼	112¼	119·0	− 6·7
'54	5	5	5	105	92	6½	98½	120·0	− 21·5
1855	4¾	5¼	5	104¾	90½	7⅛	97⅝	121·0	− 23·4
'56	5	6	5½	110	93⅛	8½	101⅝	122·0	− 20·4
'57	5	5	5	109¾	92½	8⅝	101⅛	122·6	− 21·5
'58	3¾	4¼	4	102¾	87½	7⅝	95⅛	123·8	− 28·7
'59	4¼	5¼	4¾	99¼	83	8⅛	91⅛	126·0	− 34·9
1860	5	5¼	5⅛	105¾	96½	4⅝	101⅛	127·5	− 26·4
'61	3¾	4¾	4¼	102	90¾	5⅝	96⅜	128·8	− 32·4
'62	3¾	5½	4⅝	97½	92	2¾	94¾	131·0	− 36·2
'63	4¼	6	5⅛	108¾	96¼	6¼	102½	132·9	− 30·4
'64	5¾	7	6⅜	122⅝	106	8⅜	114⅜	134·4	− 20·0
1865	6	7¼	6⅝	127¾	114⅝	6⅝	121¼	134·7	− 13·4
'66	6	6¾	6⅜	127¾	112¾	7½	120¼	134·9	− 14·6
'67	5¼	6¾	6	125¼	108½	8⅜	116⅞	135·2	− 18·3
'68	5¼	6¾	6	120½	111	4¾	115¾	136·0	− 20·2
'69	5½	7	6¼	123⅞	112	6	118	136·8	− 18·8
1870	6	7¼	6⅝	132⅛	119	6⅝	125⅝	137·4	− 11·8
'71	6¾	8¾	7¾	158⅝	126	16⅜	142⅜	137·6	+ 4·8
'72	7	8½	7¾	160½	141⅞	9⅜	151¼	136·7	+ 14·6
'73	7	8	7½	156	139⅞	8⅛	148	135·8	+ 12·2
'74	6½	7¼	6⅞	155½	143¼	6⅛	149⅜	135·1	+ 14·3
'75	6¼	7¼	6¾	151⅞	140⅜	5¾	146⅛	135·0	+ 11·1

Note.—The rate of annual interest (i) realised by a shareholder who purchased his stock in any year, will be found by dividing each of the future annual dividends (d) by the price (p) he paid for his stock. Thus 100*l*. stock bought at 254 in 1845, earned $\frac{d}{p} = \frac{10}{254} = 3{\cdot}9$ interest for the first year, in 1853 the interest fell to $\frac{5}{254}$, or rather less than 2 per cent. Upon the other hand, 100*l*. stock bought at 90·5 in 1855, earned $\frac{6{\cdot}75}{90{\cdot}5} = 7{\cdot}5$ in 1875.

TABLE VIII.—*London and North-Western Railway,* 1845-75. *Quinquennial Summary of Dividends and Prices of Stock.*

Years.	Price of 100*l.* Stock.			Excess or Defect of Mean Price over Valued Future Dividends.	Annual Mean of Present Values Deduced from Future Dividends.	Mean Annual Dividend on 100*l.* Stock.	Interest per Cent. on Stock as Current Investments.
	Highest.	Lowest.	Mean of the Five Annual Means.				
1845–49	254	99	172·5	+50·3	122·2	8·30	4·8
'50–54	135	92	114·5	− 4·1	118·6	5·25	4·6
'55–59	110	83	97·3	−25·8	123·1	4·85	5·0
'60–64	123	91	101·8	−29·1	130·9	5·10	5·0
'65–69	128	109	118·4	−17·1	135·5	6·25	5·3
'70–75	161	119	143·8	+ 7·6	136·3	7·21	5·0
31 years	254	83	125·4	− 2·7	128·1	6·20	4·9

Note.—The table may be read thus:—During the five years 1845-49, the highest price of stock reached was 254*l.*, the lowest 99*l.*, and the mean of the five highest and five lowest annual prices was 172·5*l.* This mean was 50·3*l.* in excess of the annual mean of values deduced from future dividends. The mean annual dividend during the same period was 8·3*l.* The mean interest at first on stock as investments was 4·8*l.*

The highest price of stock in the thirty-one years, 1845-75, was 254*l.*, and the lowest 83*l.*, the mean annual price was 125·4*l.* or 2·7 below the annual mean of values deduced from future dividends. The mean annual dividend for the thirty-one years was 6·20*l.* per cent., and the mean interest on stock as investments was 4·9.

TABLE IX.—*For Valuing the* 100*l. of London and North-Western Ordinary Stock at the beginning of* 1839 *and of each following Year from the Dividends subsequently Paid up to* 1875, *on the Assumption that after that Date they will Remain at* $6\frac{3}{4}$ *per Cent.* (*the Mean Dividend Paid in that Year was* $\frac{6\frac{1}{4}+7\frac{1}{4}}{2} = 6\frac{3}{4}$).

Years.	Yearly Dividends.	Dividends Multiplied by Successive Values of v^x from v^1 to v^{37}	Sum of Values, $d_x v^x$	Present Value each Year of all Future Dividends.	—
	d_x	$d\ v^x$	N_x	$\frac{N_x}{v^{x-1}}$	x
1839	$7\frac{1}{2}$	7·14285	141·60625	141·6	1
'40	8	7·25624	134·46340	141·2	2
'41	9	7·77456	127·20716	140·2	3
'42	10	8·22700	119·43260	138·3	4
'43	10	7·83530	111·20560	135·2	5
'44	10	7·46220	103·37030	131·9	6
1845	10	7·10680	95·90810	128·5	7
'46	10	6·76840	88·80130	125·0	8
'47	$8\frac{1}{2}$	5·47919	82·03290	121·2	9
'48	7	4·29737	76·55371	118·8	10
'49	6	3·50808	72·25634	117·7	11
1850	$5\frac{1}{4}$	2·92341	68·74826	117·6	12
'51	$5\frac{3}{4}$	3·04934	65·82485	118·2	13
'52	$5\frac{1}{4}$	2·65162	62·77551	118·4	14
'53	5	2·40510	60·12389	119·0	15
'54	5	2·29055	57·71879	120·0	16
1855	5	2·18150	55·42824	121·0	17
'56	$5\frac{1}{2}$	2·28536	53·24674	122·0	18
'57	5	1·97865	50·96138	122·6	19
'58	4	1·50756	48·98273	123·8	20
'59	$4\frac{3}{4}$	1·70497	47·47517	126·0	21
1860	$5\frac{1}{8}$	1·75198	45·77020	127·5	22
'61	$4\frac{1}{4}$	1·38367	44·01822	128·8	23
'62	$4\frac{5}{8}$	1·43407	42·63455	131·0	24
'63	$5\frac{1}{8}$	1·51341	41·20048	132·9	25
'64	$6\frac{3}{8}$	1·79291	39·68707	134·4	26
1865	$6\frac{5}{8}$	1·77451	37·89416	134·7	27
'66	$6\frac{3}{8}$	1·62620	36·11965	134·9	28
'67	6	1·45770	34·49345	135·2	29
'68	6	1·38828	33·03575	136·0	30
'69	$6\frac{1}{4}$	1·37725	31·64747	136·8	31
1870	$6\frac{5}{8}$	1·39039	30·27022	137·4	32
'71	$7\frac{3}{4}$	1·54899	28·87983	137·6	33
'72	$7\frac{3}{4}$	1·47529	27·33084	136·7	34
'73	$7\frac{1}{2}$	1·35968	25·85555	135·8	35
'74	$6\frac{7}{8}$	1·18704	24·49587	135·1	36
1875	$6\frac{3}{4}$	1·10997	23·30883	135·0	37
	$6\frac{3}{4}$*	22·19886	22·19886	135·0	38

* Assumed to remain constant.

Note.—This specimen table shows how the dividends of railways and other companies can be valued from the commencement, and at every subsequent year, so long as the dividends can be determined by the results, or forecast by commercial sagacity. In this table it is assumed that the purchasers expect to make on an average 5 per cent. on their investments; that the dividends on an average are therefore worth twenty years' purchase. The value increases with the dividend, provided the credit remains constant; thus to be worth $146\frac{3}{4}$, the stock must yield a higher dividend prospectively, or there must be an appearance of increased certainty.

Table X.—*New River Waterworks Company.*
Capital, 30th June, 1873.

		£	£
Capital engaged*			2,694,825
Share capital—			
Old and new, settled by Act of 1852		1,519,958	
New, raised under Act of 1866		177,490	
			1,697,448
Loan capital, debenture stock and bonds—			
4 per cent. debenture stock		577,827	
Bonds, 4 per cent.	383,200	419,550	
,, 4½ per cent.	36,350		
			997,377

Revenue, Expenditure, and Profits, 1873.
Income (*I*).

	£
Total	328,156
Water rents	318,150
Other rents or receipts	10,006

Outgo (*G*) (*including Interest on Loaned Capital*).

	£
Total	165,157
Expenses for—	
Loaned capital	40,462
Maintenance of works	94,017
Management	30,678

Disposal of Profits of Share Capital ($P=I-G$).

	£
Total	162,999
Dividends on share capital	142,741
Reserved	20,258

	Per Cent.
Profit, rate for year on *share capital*	9·6
Dividends	8·4
Reserved	1·2

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* The "capital account" professes to display the amount expended on the plant of the company, and on establishing it: thus 2,694,825*l.* are said to have been received, 2,695,817*l.* expended as capital down to 30th June, 1873. This mode of accountancy shows the nominal amount expended on a concern, but not its value.

A capital account of real use would show the present value of the water-way, reservoirs, filter-beds, and works of every description—such as wells, engines, mains, pipes; and this would be correctly expressed by what they could be constructed for now, allowing discount for actual deterioration. The capitalised dividends, if truly declared, express the value of the produce of the works, of the goodwill, and if there is a monopoly, of that monopoly.

The loan capital was reduced from 997,377*l.* to 979,957*l.* in the interval between 30th June and 31st December, 1873; the difference is 17,420*l.* Was this amount of debt extinguished out of the reserve profits of the year?

Table XI.—*London Water Companies. Amount and Description of Capital.*

(From "Financial Register," 1876.)

Companies.	Total Capital.	Paid-up Shares or Stock.	Loans.
	£	£	£
Total	12,636,641	9,895,514	2,741,127
Chelsea	1,068,750	855,000	213,750
East London	2,020,000	1,820,000	200,000
Grand Junction	1,250,000	1,000,000	250,000
Kent	750,000	600,000	150,000
Lambeth	1,498,000	1,250,000	248,000
New River	2,694,825	1,697,448	997,377
Southwark and Vauxhall	2,000,000	1,518,000	482,000
West Middlesex	1,355,066	1,155,066	200,000

Dividends and Prices of Share Capital.

Companies.	Mean in Five Years, 1871-75, of				
	Dividend per Cent. per Annum.	Highest Price of Stock.	Lowest Price of Stock.	Mean Price of Stock.	Years' Purchase of Dividend.
Mean of 6 companies....	6·86	146	136	141	20·6
Chelsea	6·00	128	118	123	20·5
East London	6·00	131	123	127	21·2
Grand Junction	7·65	167	156	162	21·2
Lambeth	6·25	130	120	125	20·0
Southwark and Vauxhall	5·50	117	107	112	20·4
West Middlesex	9·75	205	194	199	20·4

Note.—New River, in 1866 the dividend was 6·11 per cent. Kent, the dividend was 6·00 per cent.

BANK TABLES.

Table XII.—*Bank of England Stock Dividends*, 1694-1729.

Years.	Dividends.	Years.	Dividends.	Years.	Dividends.
1694–1729	8¾	1702	12	1716	8
		'03	16½	'17	8
1694–1699 (6 yrs.)	8¾	'04	15¾	'18	8
1700–09	12½			'19	7½
'10–19	7¾	1705	15½		
'20–29	6	'06	18¼	1720	7½
		'07	7¾	'21	6
1694 per cent.	8	'08	12½	'22	6
'95 per annum,	8	'09	8½	'23	6
'96 payable	8			'24	6
'97 quarterly.	8	1710	7½		
'98	11	'11	7	1725	6
'99	9½	'12	8	'26	6
		'13	8	'27	6
1700	10¾	'14	8	'28	5½
'01	9	'15	7¾	'29	5½

TABLE XIII.—*Bank of England Stock, Annual Dividends, and Highest and Lowest Prices.*

[Compiled up to the year 1845 from Francis's "History of the Bank of England," and afterwards from authentic sources.]

Years.	Annual Dividends.*		Prices of Stock.		
	Highest.	Lowest.	Highest.	Difference.	Lowest.
1730–1869	11¾	4½	299†	208	91†
1730–39	5¾	5½	152‡	43	109‡
'40–49	5½	5	148	32	116
'50–59	5	4½	162	53	109
'60–69	5½	4½	175	84	91
'70–79	5½	5½	155	50	105
'80–89	7	5½	191	86	105
'90–99	7	7	219	104	115
1800–09	10	7	288	152	136
'10–19	10	10	294	87	207
'20–29	10	8	299	106	193
'30–39	8	7	225	48	177
'40–49	9	7	214	58	156
'50–59	10	7½	230	25	205
'60–69	11¾	8	263	40	223
1870–75	10	8¾	262	31	231

* Exclusive of bonuses. † Highest and lowest in 138 years only.

‡ Highest and lowest in eight years only.

Note.—The figures relating to 1845 and subsequent years, are not the absolute highest and lowest prices of stock, but the highest and lowest on two days of each month.

Years.	Annual Dividends.	Prices of Stock.			Years.	Annual Dividends.	Prices of Stock.		
		Highest.	Difference.	Lowest.			Highest.	Difference.	Lowest.
1730	5¾	—	—	—	1750	5	136	5	131
'31	5¾	—	—	—	'51	5	142	7	135
'32	5¾	152	43	109	'52	5	149	8	141
'33	5½	151	21	130	'53	4½	144	9	135
'34	5½	140	8	132	'54	4½	135	5	130
'35	5½	146	8	138	'55	4½	162	43	119
'36	5½	151	3	148	'56	4½	121	7	114
'37	5½	151	9	142	'57	4½	120	5	115
'38	5½	145	5	140	'58	4½	123	7	116
'39	5½	144	29	115	'59	4½	123	14	109
1740	5½	144	6	138	1760	4½	114	13	101
'41	5½	143	8	135	'61	4½	116	18	98
'42	5½	143	7	136	'62	4½	119	28	91
'43	5½	148	3	145	'63	4½	131	20	111
'44	5½	148	32	116	'64	4¾	127	15	112
'45	5½	147	14	133	'65	5	136	10	126
'46	5½	136	11	125	'66	5	139	4	135
'47	5	129	10	119	'67	5¼	159	17	142
'48	5	129	12	117	'68	5½	170	12	158
'49	5	140	12	128	'69	5½	175	26	149

TABLE XIII.—*Bank of England Stock, Annual Dividends, &c.—Contd.*

Years.	Annual Dividends.	Prices of Stock.			Years.	Annual Dividends.	Prices of Stock.		
		Highest.	Difference.	Lowest.			Highest.	Difference.	Lowest.
1770	5½	153	48	105	1823	8	246	42	204
'71	5½	155	21	134	'24	8	245	18	227
'72	5½	153	9	144	'25	8	299	103	196
'73	5½	143	4	139	'26	8	223	30	193
'74	5½	146	7	139	'27	8	217	17	200
'75	5½	146	5	141	'28	8	215	12	203
'76	5½	143	9	134	'29	8	218	10	208
'77	5½	138	10	128	1830	8	203	9	194
'78	5½	120	13	107	'31	8	204	15	189
'79	5½	118	12	106	'32	8	208	23	185
1780	5½	116	7	109	'33	8	213	23	190
'81	5¾	119	14	105	'34	8	225	14	211
'82	6	124	15	109	'35	8	225	17	208
'83	6	135	23	112	'36	8	219	20	199
'84	6	118	8	110	'37	8	212	9	203
'85	6	142	31	111	'38	8	208	7	201
'86	6	158	20	138	'39	7	206	29	177
'87	6	160	15	145	1840	7	179	23	156
'88	7	178	20	158	'41	7	173	16	157
'89	7	191	22	169	'42	7	173	8	165
1790	7	188	24	164	'43	7	185	13	172
'91	7	204	26	178	'44	7	211	26	185
'92	7	219	48	171	'45	7	214	15	199
'93	7	180	19	161	'46	7 bonus	210	6	204
'94	7	169	16	153	'47	8 + 1	206	28	178
'95	7	180	28	152	'48	8	200	14	186
'96	7	180	38	142	'49	9	202	10	192
'97	7	146	31	115	1850	7½	215	9	206
'98	7 bonus	138	20	118	'51	7½	216	5	211
'99	7 + 10	176	42	134	'52	7½	227	11	216
1800	7	175	21	154	'53	8	230	17	213
'01	7 + 5	190	42	148	'54	9	218	13	205
'02	7 + 2½	207	29	178	'55	8	217	8	209
'03	7	193	57	136	'56	9½	219	8	211
'04	7 + 5	169	23	146	'57	10	221	10	211
'05	7 + 5	197	30	167	'58	10	229	12	217
'06	7 + 5	223	32	191	'59	8½	230	10	220
'07	10	235	27	208	1860	9½	234	11	223
'08	10	240	16	224	'61	10	237	10	227
'09	10	288	53	235	'62	8½	243	11	232
1810	10	276	3	273	'63	8¾	239	6	233
'11	10	251	22	229	'64	11	244	8	236
'12	10	232	20	212	'65	10½	249	9	240
'13	10	242	31	211	'66	11¾	250	9	241
'14	10	266	32	234	'67	10	263	22	241
'15	10 bonus	260	41	219	'68	8	250	10	240
'16	10 + 25*	262	47	215	'69	8¾	245	8	237
'17	10	294	74	220	1870	8¾	240	9	231
'18	10	292	85	207	'71	8¾	245	13	232
'19	10	267	57	210	'72	9½	248	8	240
1820	10	226	11	215	'73	10	254	9	245
'21	10	240	19	221	'74	10	260	8	252
'22	10	252	17	235	'75	9	262	11	251

* See notes on previous page.

TABLE XIV.—*Bank of England Stock; Mean Annual Dividends, Mean Price of* 100*l. of Stock, Mean Difference between the Annual Highest and Lowest Prices, Value of Dividends taken at Twenty-Five Years' Purchase, and Interest Realised by New Investments.*

Years.	Mean Annual Dividends.	Mean Price of 100*l.* of Stock.	Mean Differences between Highest and Lowest Prices.	Value of Dividends taken at Twenty-Five Years' Purchase.	Interest Realised by New Investments.
1732–1875 (144 years)....	8·25	181	19	189	4·56
1732–39 (8 years)	5·53	140	16	140	3·95
'40–49..........................	5·35	135	12	134	3·96
'50–59..........................	4·65	130	11	116	3·58
'60–69..........................	4·90	130	16	123	3·77
'70–79..........................	5·50	135	14	138	4·07
'80–89..........................	6·13	135	18	153	4·54
'90–99..........................	8·00*	163	29	Valued at 20 yrs. purchase 160†	4·91
1800–09..........................	10·15*	195	33	203†	5·21
'10–19..........................	12·50*	244	41	250†	5·12
'20–29..........................	8·60	224	28	215	3·84
'30–39..........................	7·90	204	16	198	3·87
'40–49..........................	7·50*	187	16	188	4·01
'50–59..........................	8·55	217	10	214	3·94
'60–69..........................	9·68	240	10	242	4·03
'70–75 (6 years)	9·33	247	10	233	3·78

* Bonuses are here included, raising the dividends by 1·00, 2·25, 2·50, and ·10 in the four decades.

† Dividends are valued at twenty-five years' purchase, except in the thirty years 1790-1819, where the dividend is taken at twenty years' purchase.

Note 1.—The price of stock requires correction, as it includes a portion of the half-yearly dividend, and may be taken for the 144 years at one-fourth of 8·25 (= 2·0625); deducting this from 180·5, the exact mean price, the price of stock is reduced to 178·4375, which, divided by 8·25, gives as generally understood the number of years' purchase as 21·629. The interest realised by new investments after the first was therefore on an average 4·62, or about 4½ per cent. The 100*l.* of stock in the six years 1870-75 was sold at 246·667, and as the annual dividend was 9·33, it was valued at 26·4 years' purchase; investments in these years yielded 3·78 interest per cent. per annum.

Note 2.—The dividends were bought at twenty-five years' purchase nearly on an average in the thirty years 1840-69. The purchaser of stock for 187*l.*, when the dividend was 7½, made 4 per cent. interest so long as the dividend remained stationary, but when the dividend rose to 9·68 his profit rose proportionately; it then became on an average $\frac{9\cdot68}{187} = 5\cdot18$ during the ten years 1860-69.

Rule—thus to find the annual rate of profit of any proprietor for any future year x, divide the dividend d of that year by the price p at which he purchased that stock. Thus $\frac{d_x}{p_0} = i$ equal the rate of profit for the year in question.

Thus in the year 1840 at least one proprietor bought stock at 156; his profit was $\frac{7}{156} = 4\frac{1}{2}$ per cent. in that year, and in the year 1874 it was $\frac{10}{156} = 6\frac{1}{2}$ per cent. nearly: whereas a purchaser of 100*l.* stock for 260 in 1874 realised 3·8 per cent. As dividends fell to 9 his profit fell proportionately $\left(\frac{9}{10} \times 3\cdot8 =\right)$ 3·4 per cent.

TABLE XV.—*Bank of England Stock; Dividends, Mean of the Highest and Lowest Prices, and Mean Interest Realised in the Year at those Prices.*

Years.	Annual Dividends.	Mean Price of Stock.	Interest of New Investments in Stock.
1844	7	198	3·54
'45	7	206½	3·39
'46	7 bonus	207	3·38
'47	8 + 1	192	4·17
'48	8	193	4·15
'49	9	197	4·57
1850	7½	210½	3·56
'51	7½	213⅜	3·51
'52	7½	221¼	3·39
'53	8	221½	3·61
'54	9	211¼	4·26
'55	8	212½	3·76
'56	9½	214¾	4·42
'57	10	216	4·63
'58	10	223	4·48
'59	8½	225	3·78
1860	9½	228½	4·16
'61	10	232	4·31
'62	8½	237¼	3·58
'63	8¾	236	3·71
'64	11	240	4·58
'65	10½	244¼	4·30
'66	11¾	245¼	4·79
'67	10	252	3·97
'68	8	245	3·27
'69	8¾	241	3·63
1870	8¾	235½	3·72
'71	8¾	238½	3·67
'72	9½	244	3·89
'73	10	249¼	4·01
'74	10	256	3·91
'75	9	256½	3·51

Note.—See note to Table XIV. The interest made in future years by any proprietor is deduced at once by dividing the dividend by the price at which his stock was purchased.

Table XVI.—*Prices of Three per Cent. Consolidated Annuities during the* **Eighty-Seven** *Years*, 1789-1875.

Years.	Consols.								
	Absolute Highest.	Absolute Lowest.	Difference.	Mean of the 87 Highest.	Mean of the 87 Lowest.	Difference.	Mean of the 87 Highest and 87 Lowest.	Years Purchase.	Interest of 100*l.* Invested.
87 years, 1789-1875	101·6	47·2	54·4	85·8	77·4	8·4	81·6	27·2	3·7

Note.—The table may be read thus:—At the mean rate of interest at which consols were purchased in the eighty-seven years, such purchase yielded 3·7 per cent. The number of years' purchase of the mean dividend was 27·2 years.

Table XVII.—*Prices of Three per Cent. Consolidated Annuities during* (1) *the* **Eighty** *Years*, 1790-1869; *and* (2) *the* **Eighty-Five** *Years*, 1790-1874.

Periods of Ten Years.	Consols.					
	Absolute Highest.	Absolute Lowest.	Difference.	Mean of Ten Highest and Ten Lowest.	Years Purchase.	Interest of 100*l.* Invested.
1790–99	97·1	47·2	49·9	67·9	22·6	4·4
1800–09	79·0	50·2	28·8	63·1	21·0	4·7
'10–19	84·2	53·9	30·3	66·2	22·1	4·5
'20–29	97·2	65·6	31·6	82·1	27·4	3·6
'30–39	95·5	74·6	20·9	89·0	29·7	3·4
1840–49	101·4	78·7	22·7	92·2	30·7	3·2
'50–59	101·6	85·1	16·5	94·3	31·4	3·2
'60–69	96·4	84·0	12·4	91·6	30·5	3·3

Periods of Five Years.	Absolute Highest.	Absolute Lowest.	Difference.	Mean of Five Highest and Five Lowest.	Years Purchase.	Interest of 100*l.* Invested.
1790–94	97·1	62·7	34·4	77·3	25·8	3·9
'95–99	70·6	47·2	23·4	58·6	19·5	5·1
1800–04	79·0	50·2	28·8	63·3	21·1	4·7
'05–09	70·4	57·0	13·4	62·9	21·0	4·8
'10–14	71·0	54·5	16·5	62·5	20·8	4·8
1815–19	84·2	53·9	30·3	69·9	23·3	4·3
'20–24	97·2	65·6	31·6	78·8	26·3	3·8
'25–29	95·7	73·9	21·8	85·4	28·5	3·5
'30–34	93·9	74·6	19·3	86·3	28·8	3·5
'35–39	95·5	86·6	8·9	91·7	30·6	3·3
1840–44	101·4	85·7	15·7	93·6	31·2	3·2
'45–49 ...	100·6	78·7	21·9	90·9	30·3	3·3
'50–54	101·6	85·1	16·5	95·8	31·9	3·1
'55–59	98·9	85·6	13·3	92·9	31·0	3·2
'60–64	95·6	87·1	8·5	91·9	30·6	3·3
1865–69	96·4	84·0	12·4	91·3	30·4	3·3
'70–74	94·5	88·5	6·0	92·4	30·8	3·2

TABLE XVIII.—*Prices of Three per Cent. Consolidated Annuities during the* **Eighty-Seven** *Years*, 1789-1875.

Years.	Consols.					
	Highest Price.	Lowest Price.	Difference.	Mean of Highest and Lowest.	Years Purchase.	Interest of 100*l.* Invested.
1789........	81·2	71·6	9·6	76·4	25·5	3·9
1790........	80·9	70·5	10·4	75·7	25·2	4·0
'91........	89·7	75·7	14·0	82·7	27·6	3·6
'92........	97·1	72·5	24·6	84·8	28·3	3·5
'93........	81·0	70·5	10·5	75·7	25·2	4·0
'94........	72·4	62·7	9·7	67·5	22·5	4·4
1795........	70·5	61·0	9·5	65·7	21·9	4·6
'96........	70·6	53·2	17·4	61·9	20·6	4·8
'97........	56·5	47·5	9·0	52·0	17·3	5·8
'98........	58·0	47·2	10·8	52·6	17·5	5·7
'99........	69·0	52·6	16·4	60·8	20·3	4·9
1800........	67·2	60·0	7·2	63·6	21·2	4·7
'01........	70·0	54·2	15·8	62·1	20·7	4·8
'02........	79·0	66·0	13·0	72·5	24·2	4·1
'03........	73·0	50·2	22·8	61·6	20·5	4·9
'04........	59·9	53·7	6·2	56·8	18·9	5·3
1805........	62·0	57·0	5·0	59·5	19·8	5·0
'06........	64·6	58·5	6·1	61·5	20·5	4·9
'07........	64·4	57·6	6·8	61·0	20·3	4·9
'08........	69·1	62·6	6·5	65·8	21·9	4·6
'09........	70·4	63·4	7·0	66·9	22·3	4·5
1810........	71·0	63·2	7·8	67·1	22·4	4·5
'11........	66·7	61·7	5·0	64·2	21·4	4·7
'12........	63·0	55·1	7·9	59·0	19·7	5·1
'13........	67·5	54·5	13·0	61·0	20·3	4·9
'14........	67·5	54·5	13·0	61·0	20·3	4·9
1815........	72·5	61·5	11·0	67·0	22·3	4·5
'16........	65·7	53·9	11·8	59·8	19·9	5·0
'17........	84·2	62·0	22·2	73·1	24·4	4·1
'18........	82·0	73·0	9·0	77·5	25·8	3·9
'19........	79·0	64·9	14·1	71·9	24·0	4·2
1820........	70·2	65·6	4·6	67·9	22·6	4·4
'21........	78·7	68·7	10·0	73·7	24·6	4·1
'22........	83·0	75·4	7·6	79·2	26·4	3·8
'23........	85·7	72·0	13·7	78·8	26·3	3·8
'24........	97·2	91·1	6·1	94·2	31·4	3·2
1825........	93·5	73·9	19·6	83·7	27·9	3·6
'26........	84·6	76·5	8·1	80·6	26·9	3·7
'27........	89·6	81·7	7·9	85·7	28·6	3·5
'28........	89·6	83·5	6·1	86·0	28·7	3·5
'29........	95·7	86·5	9·2	91·1	30·4	3·3

Note.—The prices for the years 1789-1823 were obtained from the twelfth edition of "Fenn on the Funds;" and those, from the 6th April to 5th April, for the years 1824-75, were furnished by Messrs. Mullens, Marshall, and Co., brokers to the Commissioners for the Reduction of the National Debt.

TABLE XVIII.—*Prices of Three per Cent. Consolidated Annuities—Contd.*

Years.	Consols.					
	Highest Price.	Lowest Price.	Difference.	Mean of Highest and Lowest.	Years Purchase.	Interest of 100*l.* Invested.
1830	93·9	74·6	19·3	84·2	28·1	3·6
'31	84·9	78·1	6·8	81·5	27·2	3·7
'32	89·0	82·5	6·5	85·7	28·6	3·5
'33	91·7	86·5	5·2	89·1	29·7	3·4
'34	93·2	89·0	4·2	91·1	30·4	3·3
1835	93·1	89·1	4·0	91·1	30·4	3·3
'36	93·0	86·6	6·4	89·8	29·9	3·3
'37	94·1	90·2	3·9	92·2	30·7	3·2
'38	95·5	91·9	3·6	93·7	31·2	3·2
'39	94·1	89·2	4·9	91·7	30·6	3·3
1840	93·5	85·7	7·8	89·6	29·9	3·3
'41	90·6	87·1	3·5	88·9	29·6	3·4
'42	97·2	90·1	7·1	93·7	31·2	3·2
'43	99·9	92·1	7·8	96·0	32·0	3·1
'44	101·4	97·9	3·5	99·6	33·2	3·0
1845	100·6	91·9	8·7	96·2	32·1	3·1
'46	97·2	87·9	9·3	92·6	30·9	3·2
'47	90·0	78·7	11·3	84·4	28·1	3·5
'48	94·5	80·0	14·5	87·2	29·1	3·4
'49	97·9	90·6	7·3	94·2	31·4	3·2
1850	98·5	95·0	3·5	96·7	32·2	3·1
'51	99·1	95·6	3·5	97·4	32·5	3·1
'52	101·6	98·7	2·9	100·2	33·4	3·0
'53	101·0	85·1	15·9	93·1	31·0	3·2
'54	95·9	86·9	9·0	91·4	30·5	3·3
1855	93·2	85·6	7·6	89·4	29·8	3·4
'56	96·1	90·5	5·6	93·3	31·1	3·2
'57	97·9	86·5	11·4	92·2	30·7	3·2
'58	98·9	94·6	4·3	96·7	32·2	3·1
'59	97·4	88·2	9·2	92·8	30·9	3·2
1860	95·6	91·1	4·5	93·4	31·1	3·2
'61	94·4	89·1	5·3	91·7	30·6	3·3
'62	94·7	91·5	3·2	93·1	31·0	3·2
'63	94·0	89·7	4·3	91·9	30·6	3·3
'64	92·0	87·1	4·9	89·6	29·9	3·3
1865	91·5	86·1	5·4	88·8	29·6	3·4
'66	91·5	84·0	7·5	87·7	29·2	3·4
'67	96·4	89·9	6·5	93·1	31·0	3·2
'68	96·1	92·0	4·1	94·1	31·4	3·2
'69	94·2	91·5	2·7	92·9	31·0	3·2
1870	94·5	88·5	6·0	91·5	30·5	3·3
'71	94·0	91·4	2·6	92·7	30·9	3·2
'72	93·7	91·2	2·5	92·5	30·8	3·2
'73	94·0	91·7	2·3	92·9	31·0	3·2
'74	93·6	91·2	2·4	92·4	30·8	3·2
1875	95·6	92·4	3·2	94·0	31·3	3·2

ABLE XIX.—*Prices of Consols, Bank-Rate of Discount, and Average Prices of Wheat and Meat.*

	Mean Price of Consols, Stock derived from						Rate of Interest by New Investments.			Average Price of Meat per 100 lbs. at the Metropolitan Meat Market.	
	Daily Return.*	Absolute Highest and Lowest during the Year, and Mean of the Two.			Interest of 100*l.* Invested in Consols.	Mean Minimum Bank-Rate of Discount per Cent.†			Average Price of Wheat per Quarter.		
	Mean.	Mean.	Highest.‡	Lowest.‡			In Bank Stock.	In London and North-Western Railway Stock.		Beef.	Mutton.
	£	£	£	£	£	£	£	£	£	£	£
ean f 20 ears. 55-74	92·6	91·9	94·4	89·4	3·3	4·3	4·0	5·1	2·7	2·4	2·6
55	90·4	89·9	93·7	86·2	3·3	4·8	3·8	5·1	3·7	2·3	2·4
56	93·0	90·8	95·9	85·7	3·3	5·7	4·4	5·4	3·5	2·2	2·4
57	91·9	90·3	94·2	86·5	3·3	6·8	4·6	4·9	2·8	2·2	2·4
58	97·0	96·3	98·7	93·9	3·1	3·2	4·5	4·2	2·2	2·2	2·3
59	95·0	92·8	97·4	88·2	3·2	2·8	3·8	5·2	2·2	2·3	2·4
60	94·0	94·2	95·9	92·5	3·2	4·2	4·2	5·1	2·7	2·2	2·5
61	92·0	91·6	94·2	89·0	3·3	5·3	4·3	4·4	2·8	2·2	2·6
62	93·5	92·5	94·7	90·4	3·2	2·5	3·9	4·9	2·8	2·1	2·4
63	92·9	92·0	94·0	90·0	3·3	4·5	3·7	5·0	2·2	2·2	2·4
64	90·4	89·5	92·0	87·1	3·3	7·5	4·6	5·6	2·0	2·3	2·6
65	89·6	89·1	91·5	86·7	3·4	4·7	4·3	5·5	2·1	2·4	2·9
66	87·9	87·5	90·4	84·6	3·4	7·0	4·8	5·3	2·5	2·4	2·8
67	93·1	93·0	96·4	89·7	3·2	2·5	4·0	5·1	3·2	2·4	2·5
68	94·0	94·0	96·1	91·9	3·2	2·1	3·3	5·2	3·2	2·3	2·3
69	93·1	92·9	94·2	91·7	3·2	3·2	3·6	5·3	2·4	2·6	2·6
70	92·6	91·3	94·5	88·2	3·3	3·1	3·7	5·3	2·3	2·5	2·7
71	93·0	92·7	94·0	91·4	3·2	2·9	3·7	5·4	2·8	2·7	2·9
72	92·5	92·3	93·4	91·2	3·2	4·1	3·9	5·1	2·9	2·7	3·1
73	92·7	92·8	94·0	91·7	3·2	4·8	4·0	5·1	2·9	2·9	3·2
74	92·6	92·4	93·6	91·2	3·2	3·7	3·9	4·6	2·8	2·8	2·8
75	93·8	94·0	95·6	92·4	3·2	3·2	3·5	4·6	2·3	2·8	3·1

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* Derived from the "Economist." To correct for included dividend deduct 0·75 from price stock. Thus 92·6 − 0·75 = 91·85, and interest is 3·27 per cent., or nearly 3·3, corrected mean twenty years.

† The rates for the years 1855-67 are from the "Banking Almanac, 1876," p. 123. Where the llings of the rate are odd, the decimal has been raised in the alternate number, thus 4*l.* 15*s.* -*d.* tten 4·8, and 5*l.* 15*s.* -*d.* is written 5·7. The rates for the years 1868-75 were kindly supplied the cashier of the Bank of England, the time the respective rates ruled is taken into account. ee "Quarterly Return of Registrar-General."

‡ From "Fenn on the Funds," 1876, p. 24; for the years 1873-75, the figures are taken n previous table.

SUPPLEMENTAL TABLE.

Table XX.—*Dividends and the Calculated and Mean Market Price of 100l. of Stock of t Bank of England, of the London and Westminster Bank, and of the London a County Bank.*

1	2	3	4	5	6	7	8	9	10
	Dividends.			Calculated Value of Stock.			Market Price of Stock (Mean).		
Years.	Bank of England.	London and Westminster Bank.	London and County Bank.	Bank of England	London and Westminster Bank.	London and County Bank.	Bank of England.	London and Westminster Bank.	London and Coun Bank.
1837	8	5	5	—	—	160	208	—	—
'38	8	5	5	—	194	165	205	108	—
'39	7	6	5	211	201	169	192	—	—
1840	7	6	5	212	207	175	168	115	—
'41	7	6	5	214	213	180	165	—	—
'42	7	6	5	215	220	186	169	110	—
'43	7	6	5	217	227	192	179	—	—
'44	7	6	5	219	235	199	198	120	—
1845	7	6	5	221	243	205	207	—	—
'46	7	8	6	222	251	213	207	130	—
'47	9	6	6	224	258	220	192	—	—
'48	8	6	6	224	268	227	193	113	—
'49	9	6	6	225	278	234	197	115	—
1850	7½	7½	6	225	289	242	211	130	—
'51	7½	8	7	227	299	251	213	140	—
'52	7½	8	8	228	309	259	221	150	—
'53	8	10	10	230	319	267	222	180	—
'54	9	14	12	231	328	273	211	200	163
1855	8	15	15	231	334	277	213	230	180
'56	9½	17	11	233	339	278	215	245	180
'57	10	16	11	232	342	284	216	250	150
'58	10	17	11	232	347	290	223	230	143
'59	8½	18	11	231	351	297	225	250	150
1860	9½	20	11	232	354	303	229	290	170
'61	10	22	13½	231	355	311	232	335	185
'62	8½	22	12½	231	354	316	237	375	190
'63	8¾	25	18	231	353	322	236	400	210
'64	11	30	34	232	349	324	240	450	310
1865	10½	30	27½	230	340	309	244	475	403
'66	11¾	30	25	229	331	300	245	475	365
'67	10	30	20	226	321	293	252	500	305
'68	8	25	16½	225	310	291	245	350	263
'69	8¾	16½	17	226	304	291	241	320	250
1870	8¾	18	17½	227	305	292	236	305	253
'71	8¾	18	18½	227	306	292	239	320	263
'72	9½	20	20	227	306	291	244	335	300
'73	10	25	20	227	304	288	249	345	293
'74	10	21	20	226	297	286	256	360	300
1875	9	12	16½	225	294	283	257	300	320
'76	—	—	17	—	—	283	—	—	—
Mean, 1839–75	8·6	15·2	12·7	226	299	263	219	270*	243†

* Mean of thirty-two years—alternate from 1840, consecutive from 1848.

† Mean of twenty-two years from 1854.

Note.—Columns 5, 6, and 7 of this table were calculated in the same way as the corresponding columns of Table relating to the London and North-Western Railway.

The rates of interest were different. The Bank of England was valued on the 4 per cent. interest table; the Lond and Westminster and the London and County Banks were valued by the 6 per cent. interest table.

The mean values are calculated on the assumption that in each year the amount of future dividends is known up 1875, and then remains stationary. That uncertainty has its effect on the values of the last fifteen years, but before that influence is not considerable.

Thus in the year 1855 the annual dividends of the three banks were 8, 15, 15; the calculated values of 100*l.* of sh capital were 231, 334, 277; the market values of that year were 213, 230, 180; the prospective rise of dividends not enter sufficiently into the market prices.

The mean values of the Bank of England stock during the thirty-seven years 1839-75 were—calculated 226, mar value 219; of the London and Westminster Bank the mean values were—calculated during the thirty-seven years 2 market value during the thirty-two years ranging from 1840 to 1875, 270; of the London and County Bank the me values were—calculated during the thirty-seven years 263, market value in the twenty-two years 1854-75, 243.

I have to thank Mr. R. H. I. Palgrave for some of the data in this table relating to the London and Westminster Ban and Mr. McKewan for the dividends of the London and County Bank.

Mr. Shipp, Secretary of the London and Westminster Bank, has kindly revised the dividends; he remarks that t dividends were paid on various amounts up to 1849; from that date to 1869 the capital was 1,000,000*l.*, and since then has been 2,000,000*l.*

DISCUSSION *on* DR. FARR'S PAPER.

MR. D. CHADWICK, M.P., said he thought the paper, though a very able one, was somewhat imperfect, because he had not quite gathered the exact moral lesson which Dr. Farr wished to deduce from his calculations and the instances that had been laid before them. It was no doubt very instructive to have a review of the fluctuating price of a great stock like that of the London and North Western Company, but Dr. Farr had only shown that the market price bore some relation to the anticipated profits; in other words, the value of railway stock, as of other investments, was, or ought to be, in proportion to its profit-making capacities, or to the income that is expected to be derived from the investment of that stock, keeping the capital always intact. With regard to the purchase of the telegraphs by the Government, he had always held that that purchase was one of the most unreasonable and exorbitant transactions that any nation ever conducted, and he had no hesitation in saying that three times the proper full value had been paid, and three times the value they would have brought if they had been bought even on the extravagant railway purchase system for new lines, namely, giving their then present value, and a certain margin of 5, 10, or 15 per cent. for compulsory purchase. That class which Dr. Farr had referred to, namely, those who had telegraphs on railways, in some cases obtained about twenty times their actual value by including collateral and incidental claims of various kinds, in all of which the ingenuity of man was never more exercised than in finding the means of claiming for present and prospective interest under that Act of Parliament. If the Society could do any good in commercial matters, it would be to give the advice never to be in a hurry in any purchase whatever. He thought the Government had made a great mistake in the telegraph purchase, and it was a mistake of which the nation should every year be reminded, in order, if possible, to prevent its recurrence. The same mistake had been, however, repeated in the Suez Canal purchase last year. He had no hesitation in saying that the purchase of the Suez Canal, could it have been arranged with reasonable people within a reasonable time, would have been made at one-half the price paid for it. He should like to say a word as to the mode in which valuations of business properties should be made. It had fallen to his lot to have much to do with valuations and valuers. He expected that Dr. Farr would make some practical suggestions to the effect that a valuer who took out a licence to put a value upon property, whether it was 100*l*. or 100,000*l*., and valued it at two or three times its actual value, would be guilty of a fraud. In such valuations as came within the scope of the paper, the greatest possible amount of care was required. He did not quite agree with Dr. Farr in his statistical view, because there were many data to be taken into consideration, and it was often impossible to estimate the prospective value, and therefore the prudent course was not to take any estimate of 5 per cent. Here were scores and hundreds of businesses in this and the manufacturing districts in which the land, building, machines and plant were not worth more than six years' purchase, in addition to the working capital required. He had never ventured to put into a statistical form any calculation as to what was the real value of the purchase of trading properties, or the property of railways, which depended on so many fluctuating elements, and he would be glad if Dr. Farr would follow out the subject and include the different investments mentioned in the last paragraph of his paper. The question was, what was the practical benefit that students of statistical data should draw from the paper, and what lessons, he (Dr. Farr) wished should be learned therefrom. In all estimates the value of a trade or business, where there was the means of past experience, should be estimated according to its profit-producing capacity, leaving intact the capital which was required to work the business. He expressed personally his thanks to Dr. Farr for the trouble he had taken, and he hoped he would be encouraged to proceed further in his investigations.

Mr. J. B. MARTIN took exception to the identification by Dr. Farr of covetousness and acquisitiveness, and said that in old times the ideas of interest and money-making differed widely from those of the present day; he cited Aristotle, who in defining virtue, dismisses the "money-getting life" as utterly beneath consideration, and though the Greek word for interest, τόκος, signified the child of capital, it was held to be in every case illegitimate. The first question to be answered was what is the natural rate of interest? In the case of consols they might be worth 95 to-day and 94 to-morrow: an Exchequer bill was, perhaps, the best instance of an investment of which the principal was practically assured, but very few held Exchequer bills now-a-days, and he did not know what was their present rate of interest. Dr. Farr said that the interest on a purchase of land produced from 3 to $3\frac{1}{4}$ per cent., but so far as he (Mr. Martin) gathered from recent statistics, he did not think that the purchasers of land got 3 per cent. for their money. Therefore he did not see why it should be assumed, as a basis, that people expected 5 per cent. Five per cent. was a very convenient figure, but he did not know whether there was any law by which they should expect 5 per cent. He thought it might more justly be assumed that between 3 and 4 per cent. was what people expected to gain if they wished to get their capital back intact. Referring to Table VII, of the variations which had taken place in London and North Western stock, in order to show how different were the calculated from the actual values, it appeared that in 1849 the real value was 123, and the calculated value would be 117; that was because they relied on the high dividends of the past. In 1859 the real value was 91, and the calculated value was 126; this was because holders were discouraged by low dividends of ten years. In 1875 the real value was 146 as a mean, and the calculated value was 135. Dr. Farr had dwelt especially on railway stocks. The question might be asked were railways final? Turnpikes and canals and other stocks that were in existence forty years ago, had now vanished, and no one could say whether railways might not be subject to a similar fate in the future. If a more economical mode of conveyance were formed, that would deteriorate the value of railways, and what would become of the 600 million pounds capital that had been spent in making them? If, on the other hand, railway administrations could work more economically, or even abolish preventible accidents, the stocks would be more valuable. With regard to the estimate of future value, he thought the more practical way would be to go to some half dozen *bonâ fide* stockholders, and ask how many years' purchase they would take for their stock. They must all feel indebted to Dr. Farr for his able paper, the calculations of which he was utterly unable to grasp off-hand, but he confessed that it did not afford him much guidance for the immediate future.

Mr. F. PURDY said that in many instances there were great and inordinate differences between the value returned to the Crown and that returned to the local authorities. In 1870 Mr. Göschen, when at the Poor Law Board, obtained returns of the rateable value of assessable property in England. The parochial assessments on railways were among other things set out in that important document. He (the speaker) compared the rateable value of railways with the value returned to the Crown, and found that the Crown had a million of money as a basis for taxation more than the local authorities had. There was a mode of valuing a railway not by looking into the future, but by quite a different method. If Dr. Farr could foretell the value of the future, his mode of valuation would be perfect; but that element of futurity was just the thing that they could not discern, and therefore men's hopes, fears, and fallible judgments should, in making such valuations, be brought into estimate as all-important factors. Mr. Hedley had surveyed and raised the rating of railways successfully in many individual parishes, and if he were present would give information as to his mode of valuing them. Mr. Purdy thought, in regard to railways, a better notion would be obtained of their value from an experienced surveyor than any mere set of tabulated formulæ could yield. With all due deference to Dr. Farr, although his paper was a very valuable one as a retrospect, it was deficient in its prospective features. In all matters regarding the future of human affairs there must be a large and radical element of doubt, which no mathematics can destroy.

Mr. F. HENDRICKS believed that they would all concur in a cordial vote of thanks to Dr. Farr for his very interesting paper. The rules for estimating a complicated class of contingencies were there presented from a theoretical point of view, and although the mathematical principles for calculating all future variable, but definable, incomes are perfectly well known, he doubted whether so able a *resumé* of the general principles of such calculations was to be found anywhere else than in Dr. Farr's paper. In the practical application of such principles great care should, however, be always exercised, and in his own experience only once had he been consulted in a case where he felt sure that the law of geometrical progression could fairly be applied. The case he referred to—and an exception would often prove a rule—was that of the Corporation of London when they borrowed some money a few years ago, in order to pay for the purchase of certain metropolitan bridges, under the "Kew and other Bridges Act." This loan had to be raised by the corporation pledging its repayment with compound interest out of the future income to arise in one distant year out of the coal tax which was secured to them under an Act of Parliament as a growing income for a specific number of years. The way in which the city of London raised this money was by the grant of bonds bearing no interest actually payable, but with right to accumulated interest at the end of a certain period, consequently the law of geometrical progress had to be considered, and probable income from the coal duties had to be estimated beforehand, according to its expected growth at a future period of time. The necessity of coal for all the certainly increasing population coming under the incidence of the coal duties, as well as for manufacturing purposes, was so great that there the law of geometrical increase could be fairly taken into account; and the city of London accordingly adopted these calculations, and successfully raised the sum required. That was the only case in his practice where he had deemed that the law of geometrical increase could properly be assumed for any considerable term of years, because it there depended upon an object, coal, which was indispensable to life. But as regards railways it was quite a different matter. There the expenses of competition, of labour, of material, and of everything necessary for the working of these enterprises had also to be considered, and of course the various expenses contingently entailed by all these conditions might increase in a geometrical ratio, just as the traffic or receipts might be increased, and consequently the market price of the day as regards railways in general would seem to be a fair exponent of the value (so far as public estimation could fix it) as regards increase, and nothing should be added. As to the telegraph companies' claims upon the government for loss of prospective profits on the lines that had been bought up by the postmaster-general, he was one of those who had been consulted, as well as Dr. Farr, on the occasion of the arbitration referred to by Dr. Farr, when it was satisfactorily proved that to assume geometrical increase in telegraph development by estimating the number of years' purchase or present value to be given for a supposed perpetually increasing, and never decreasing, income, was a *reductio ad absurdum*, because by this system of geometrical increase they would arrive mathematically at infinite compensation. Five per cent. per annum was the average rate of increase which the gentleman referred to in Dr. Farr's paper, and the railway company itself had assumed in the Great Eastern arbitration. But to mark how much the very advocates of this method doubted their own premises, they were obliged to stop short at twenty years, because they soon found that even if that period of time, for which this rate of increase was assumed, had been further extended, it led to very exaggerated amounts of claim for compensation. Even in the valuation of incomes resting on Government security, he thought that the faith of mankind had been much shaken by the events of the last few years as regards the value to be attached to promises to pay income at fixed or other rates of interest in perpetuity. In some great countries like France the national debts had been increased by very sudden and unlooked for contingencies to an enormous extent, although, at present, there was, in the instance of France alone, particular reason why, from the great wealth of that country, there was ability to bear thus far the vastly increased burden, who could say that if, on the next occasion of an European war, the fortune of battle again turned against her or some other country, the compensation to pay might not be doubled or trebled, and that the value of the engagement to pay might not decline in the inverse ratio to the fresh burden imposed? In a country like Spain it might be said that the estimate might until quite recently have been made at 10 per cent., valuing (as was the case not many years ago) at 30 for the 3 per cents.; but now two-thirds of the debt are, at one application of the sponge, proposed to be wiped off for an indefinite number of years, and the engagement that was worth 30 is hardly worth 13 or 14. Then there are other countries where recent events have shown that as between the holders of various classes of bonds, the claims of some are ruthlessly liable to be sacrificed to the less equitable claims of the others, and this leads to such great difficulties in valuing the promises of Governments as regards the distant future, that he did not see the way himself in practically applying any of the methods of valuing prospective pledges of national or other incomes without special limitations in every case. He would rather go back for the best criterion of ordinary value of future dividends, to the market value, and, as suggested by Mr. Chadwick, with some small fixed addition in any compulsory purchase, a principle well recognised in everyday experience.

Mr. C. Walford said that a very interesting point had been raised with regard to the rate of interest to be assumed in calculations of the character contemplated. He had had occasion, as many of them had had, to turn his attention to this question, and to try and get an illustration of what might be termed the "natural rate of increase." After thinking for a considerable period, he had come to illustrate it by an original and very simple test, namely, the natural growth of timber. Taking a tree, for instance, which cost nothing to produce and nothing to cultivate, and then there would be obtained a simple proposition. The tree went on growing from beginning to end; and the natural increase in the value of a tree, a wood, or a forest of trees, was 4 per cent. per annum. Of course a tree standing by itself might detract from the value of the produce of the ground, but on the other hand its dropping foliage would add to the value of the surface land over a period of years. They had here a simple test, as it seemed to him, of what was the natural rate of increase, namely 4 per cent. He could not help feeling that Dr. Farr was impressed with the opinion that sooner or later the railways would become a question of State purchase. The purchase of the telegraphs ought to put them on their guard in reference to the railway question. It ought to be remembered that the railway interest in the House of Commons was larger than the telegraph interest, and more astute; and it was necessary that learned societies should take up these points and consider them, that the outside public should know how much ought to be paid for them. In the case of leasing lines a scale of apportionment would have to be made for the lessee and the lessor in dealing with their several interests. Such leasing happened in frequent cases. He should have been glad if the purchase of railways by the State had been carried through a few years ago, because he believed that the Government would now have to pay for the more liberal policy which had now been brought into play. Railways were no sooner constructed than the railway directors and managers of lines did everything they could to prevent the people having the free use of them. They ran the cheap trains—by which alone the masses of the people could and would travel—at the most unreasonable hours, and so made a railway journey a source of trouble and vexation instead of pleasure. It was only by the forward policy of the Midland Railway Company that railways had been brought as it were to the doors of the people. A greater disgrace than the mismanagement of some of the railways of this country could not be conceived. It was only now that the masses were for the first time in this country being induced to travel as matter of pleasure as well as of business. That improved system of railway management was making a revolution in regard to the earnings of railways from passenger traffic; and it was unfortunate that such an improvement might at this moment be made a means of increased exaction on the part of the railways as against the Government in the matter of their purchase.

Mr. ROBERT VIGERS said that it had fallen to his lot to be connected with the valuations of railways and other properties, and if of any use to the Society, it would give him very great pleasure to state a few facts which should be taken into consideration in arriving at the rateable value of a railway. In the first place, he must say there were numerous difficulties placed in the way of railway companies and valuers by the existing Acts of Parliament, but the most recent Acts of Parliament had in some degree assisted all interested, and during the last session a Bill had been introduced into the House which would help both sides to arrive at a fair valuation. A railway valued for assessment must now be cut up into a variety of sections, according to the number of parishes it passed through. It must at once be seen that here commenced the difficulty. A large establishment—or one large factory, if he might so call it—because it was situate in two or three, or in twenty or thirty different parishes, had to be cut up into small pieces in order to arrive at the value in each parish, and in arriving at such value he contended that it should be treated as one going concern, precisely in the way that he expected the railway company would wish it to be valued if they were about to sell it to the Government. But under the existing Acts of Parliament, in arriving at the value you have to take the traffic over one part of the system through a parish and apportion all sorts of charges by train mileage; and it happens that railway companies in some parishes are valued much too high, and in other parishes much too low, and taken as a whole it will be found in the end that very inconsistent and unfair valuation is arrived at. In answer to the gentleman who stated that there was a difference of a million between the parochial and the imperial valuations, he would say that the imperial valuation was taken to be the gross value of the property in the parish, and the parochial valuation was called the rateable value. There were certain deductions according to a schedule to be made from the one in order to arrive at the other; this accounted for the difference. He certainly thought that if the Society could and would take the matter into its consideration, the new Valuation Act now proposed to be passed through the Houses of Parliament might be greatly improved. There was another question that Dr. Farr suggested in his paper, "that in arriving at the valuation of a railway, the detailed cost of forming the line should first be entered into and then the value of the stock." He (Mr. Vigers) could not quite agree with Dr. Farr, as the cost of a railway could not possibly have any reference to the value for renting or for sale. His view of it was that the value of a railway must be based upon the net income it was producing, and that it would not be fair first to charge the cost and then the value of the stock. With reference to what had been said by Mr. Chadwick and others about the Act for the purchase of the telegraphs, it is clear there are some unfair clauses in it: one clause no doubt gave some railway companies and some telegraph companies a much larger sum than they could fairly claim; but he thought that Dr. Farr and some of the other speakers should put it quite clearly to the meeting that many of the large figures that had been mentioned were simply the claims. It had fallen to his lot to be called upon to assist in some of these cases, and he would mention the clauses under which some of these very large claims were made. One clause provided that the vendors were to have twenty years' purchase on the net profits. Every one knew that that was a very large number of years' purchase to give for the property, part of the income being derived from profits of trade, as with a gas company or a telegraph company. There was a certain amount of income which was derived from property, and was a fair and proper income to be dealt with on the 5 per cent. table, and there was another part of it that was a very precarious property, subject to competition, and that at the outset, instead of twenty years', should be valued at five or six years' purchase. Another clause in the Act said that they should be paid twenty times the net annual increase based upon the net average increase for the preceding years. The way that the claimants had read that clause was that they were to take interest and compound interest for twenty years, and in one case tables had been made by a very ingenious gentleman to prove that he was entitled to forty years' purchase of these precarious incomes. The Great Eastern Railway claim was 412,608*l.*, but the award was only 73,000*l.* There was another case, of which he could speak with greater confidence. The Lancashire and Yorkshire Railway claimed 1,271,000*l.*, and the award was for 161,197*l.* So that it was clear that if there was a difficulty in working the Act of Parliament, the post office authorities were not falling into the trap which Mr. Chadwick expected, and they were fighting the cases very judiciously and with great care.

Mr. J. Fisher (of the Great Western Railway) asked permission as a stranger to correct one or two errors with regard to the mode of valuing railways for state and parochial purposes. They were valued in totally different ways. The parish had nothing to do but with the land; the personal property was taken out of it by the deduction of trade profits. But the State taxed all. Where the difference of a million arose he was at a loss to discover.* The State took the profits of the whole concern: the parish was limited to taking the profits of the land only; and that, he thought, was the real difference between the two. In fact the two would not compare at all. It was the business of the parish officer to ascertain what was the rent of the real or rateable property only, and it was the business of the government officer to ascertain what were the profits of the whole of the combined property, and on that the income tax was paid by the railway company in one sum. He was surprised to hear one of the speakers say that the difference arose from another cause, namely, that the parish took the net value and the Government took the gross value. That seemed to him inexplicable; because the gross value was the value ascertained by the rating authority on behalf of the parish, and, subject to certain deductions, became the rateable value for all parochial purposes.

Dr. Farr, in reply, thanked the meeting for the reception his paper had met with, and especially those who had taken part in the discussion. He had not attempted to value the future dividends in a single case. He apprehended that if gentlemen thoroughly conversant with any particular property, had to value it, they would look most carefully into the several items of revenue from traffic, or minerals, or goods, and would endeavour to determine what the expenses were likely to be. They would consider further whether the dividends of the railways were likely to increase; and if they made up their minds that such increase would take place, then the

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* The following figures, since furnished by Mr. Fisher, will show the incidence on the railway companies of the different taxes to which they are subject:—

	£	
Government duty, as paid on the railways in England and Wales in 1874	548,800	being 5 per cent. on their passenger earnings from certain classes.
Income tax, under Schedule D, for the same period	189,000	being 2*d.* in the pound on 22,675,000*l.*, their net revenue.
Total of imperial taxation	737,800	
For parish and other local rates, for the same period	994,980	on the value of the land and buildings forming the railway, and representing an annual net value of about 7,500,000*l.*
Total taxation, imperial and local	1,732,780	

question was, how much they were likely to increase. His tables enabled them to test the effect of any increase of dividend on the value of stock; and this value of an increasing dividend could not be determined by the "rule of thumb." Mr. Hendricks would see that the tables had been constructed to show the effect of dividends, either stationary, increasing, or decreasing in arithmetical progression. He (Dr. Farr) quite agreed with him as to the abusive application of the doctrine of geometrical progression, to the valuation of the profits of telegraphy, and could only express a wish that the tables might be found practically useful, and enable the public to understand enough of the doctrine of valuation to avoid some of the errors which had been committed in the purchase and sale of a great variety of concerns.

The CHAIRMAN, in moving a vote of thanks to the author, referred to the increasing necessity there was for the Government to ascertain the full value of the properties which they contemplated purchasing before they engaged to pay for them. He also remarked, with reference to the valuing of railways for rating purposes, that in his belief nothing would have been more satisfactory to the parishes than to have been allowed to value the railways by the mileage scale; but unfortunately it had been understood that the railway companies disliked that scale of valuing, and compelled the parishes to estimate the rateable value on the parochial scale.

On the VALIDITY *of the* ANNUAL GOVERNMENT STATISTICS *of the* OPERATION *of the* CONTAGIOUS DISEASES ACTS. *By the* RIGHT HON. JAMES STANSFELD, M.P.

[Read before the Statistical Society, 20th June, 1876.]

I AM absolutely opposed to the Contagious Diseases Acts from an hygienic point of view.

I am not of course going to argue that question, much less the moral or constitutional view. I simply make this preface for frankness sake.

In the course of the reading which I have been compelled to go through, I have thought that I have always observed, in the advocates of this kind of legislation, a shortsightedness which made it impossible for them to bring within the limits of their mental vision the conditions which, in true perspective and with due sense of proportion, have to be taken into view, if we would solve rightly the problem of the hygienic value of these laws.

What I have to submit to-night is, that the Government statistics and returns partake of this very same defect, and that in this and in other respects they are, scientifically speaking, insufficient to support the conclusions which they are supposed to demonstrate.

It will be admitted in this Society that the following are tests which I am entitled to apply to such statistics.

I. They ought to be so constructed as to throw light upon the real problem to be solved, and not merely upon some minor, subordinate, and it may be incidental problems, whose relation to the larger and ultimate problem may be uncertain or unascertained.

II. The terms which they use should be exact, their grouping of facts should be logical and consistent, and any classification of disease should be a classification accurately and scientifically conceived, with a view to its bearing on the solution of the problem which they are intended to elucidate.

III. The statistics must be reliable.

IV. The results which they present more or less in statistical form, must be in reality results of the legislation whose effects they propose to demonstrate, and not mere coincidences which may be due to other causes.

In all these respects the Government statistics appear to me to be so faulty and deficient, that my proposition to-night is, that from a purely scientific and statistical point of view they cannot be regarded as a valid basis of practical justification for the system of legislation which they profess to justify, and which they are put forward and quoted to support.

I propose to deal with each of these propositions in turn. The first is:—

The statistics must be so constructed as to throw light upon the real problem to be solved, and not merely upon some minor, subordinate, and it may be incidental problems whose relation to the larger and ultimate problem may be uncertain or unascertained.

The problem is, the true hygienic value of this legislation. Are the statistics so constructed as to throw light upon this problem? To answer this question we must understand the problem first. The object of this legislation has always been stated as a double object, always so stated in debate, in the evidence and reports of committees and commissions, and inferentially in the statistical reports of which I now speak. This double object is: (1) The increase of the available strength of the army and navy by the reduction if not the prevention of venereal disease. (2) The general reduction of that more serious form of disease which is capable of transmitting an hereditary taint.

I shall endeavour to show under another head the insufficiency of the Government statistics, regarded as evidence of success in the attainment of these objects. But what I now say is that they do not themselves define truly the problem of the hygienic value of this legislation; and that whatever light the Government statistics may throw upon any part of the subject, they throw only upon minor and subordinate problems, the relation of which to the larger and ultimate problem I am entitled to say is as yet unascertained.

You cannot judge the hygienic consequences of such legislation by reference to army and navy statistics only; it affects also the civil population within the districts to which it applies. You cannot judge them on the assumption that it is always to be confined to these districts. Such legislation tends inevitably to its own extension. There is a logic in the events which constitute the growth of law. This legislation is not, historically speaking, founded solely (I might have said mainly, but that is not necessary for my argument) upon the sense of its necessity to promote the efficiency of our army and navy. It has a wider base.

You cannot judge with any certainty of the source, and the yet hidden law of growth, of a new movement in any country, if you look to that country only; and I appeal to all scientific men who have given any attention to this subject, to say whether the introduction into this country, in whatever guise, and however limited, of a system of State-regulation of prostitution, is not borrowed from countries where its application has been extended to the population at large; and whether, scientifically, we are not bound to take this fact into account in endeavouring to calculate the future influence, in which must be included the probable future growth of these laws. Such growth would be a matter of necessity here in the long run. The basis of army and navy efficiency is too narrow a support for such legislation. The argument of the right and duty of the State to stamp out, if possible, that particular and constitutional form of venereal disease which may convey the hereditary taint leads, logically, and scientifically, to a demand for the generalisation of the law, and in fact that demand is already made. But if you assume the law to be applied to the whole country, your field of hypothesis is still not wide enough for true scientific induction; you must suppose your law in existence for successive generations if you would reason out its real effect, and you must trace by assumption or from experience gathered elsewhere, the effect of such a law when generalised and acting upon successive generations, as an educating influence, determining the character and the sexual habits of these generations, and the general and permanent influence of this character and these habits upon the health and vigour of a people.

In an inquiry into health superficially and narrowly scientific people are apt to reason as if moral influences should be excluded from consideration. To me, true science demands that no condition, however distant, which has a bearing on the problem, should be omitted from consideration.

You may reduce the percentage of cases of disease consequent upon sexual vice in given localities for a given time, but if your policy stimulates and increases the vice itself, that reduction may be temporary only, and its advantage apparent and not real.

Or you may succeed permanently in reducing the percentage of specific disease, but at the cost of so stimulating vice, and especially early vice, that you may inflict a more general and irremediable injury on the health and vigour of a people, than if you had left the specific disease untouched and unreduced.

On the ground of such reasoning as this, which I could much farther develope did time permit, I maintain my first proposition, that the Government statistics, by which I mean the Government reports, including the statistical calculations which they contain, are not directed to the real problem in its true dimensions, of the hygienic effect and tendency of this newly introduced legislation; and that this is a fact calculated to produce impressions, and to lead to conclusions, scientifically unsound, and that it is a fault in these statistics themselves scientifically viewed.

But now let me take the problem as it is implicitly presented to the public mind on the face of these statistics and returns, the double problem and object of which I have spoken above. Are the statistics constructed so as to throw the clearest light they can throw upon each of these two problems?

Let me direct your attention to the first tables which I carefully studied when I addressed myself to the subject of this legislation. You will find them in the "Army Medical Report" for 1872, p. 10.

TABLE I.—*Showing the Admissions into Hospital for Primary Venereal Sores and Gonorrhœa, at Twenty-Eight Stations of Troops in the United Kingdom in each Year.*

Year.	Not under Contagious Diseases Act.				
	Average Strength.	Primary Venereal Sores.	Gonorrhœa.	Ratio per 1,000.	
				Primary Venereal Sores.	Gonorrhœa.
1864	60,681	6,590	6,828	108·6	112·5
1865	55,167	5,346	6,253	99·9	113·3
'66	49,150	4,469	4,882	90·9	99·3
'67	36,439	3,936	4,794	108·0	131·6
'68	34,311	3,662	4,406	106·7	128·4
'69	27,401	3,066	2,809	111·9	102·5
'70	17,852	2,022	1,723	113·3	96·5
'71	19,957	1,865	2,137	93·4	107·4
'72	19,950	2,457	2,113	123·1	105·9
Totals of 8 years	260,227	26,823	29,117	—	—
Average, 1865-72	32,528	3,353	3,640	103·1	111·9

Year.	Under Contagious Diseases Act.				
	Average Strength.	Primary Venereal Sores.	Gonorrhœa.	Ratio per 1,000.	
				Primary Venereal Sores.	Gonorrhœa.
1865	7,393	887	1,039	120·0	140·5
'66	10,161	920	1,676	90·5	164·9
'67	24,061	2,076	3,150	86·3	130·9
'68	27,770	2,001	3,515	72·1	126·9
'69	32,355	1,972	3,513	60·9	108·6
'70	41,580	2,268	4,081	54·5	98·1
'71	54,090	2,763	6,254	51·1	115·6
'72	50,794	2,752	5,280	54·2	104·0
Totals of 8 years	248,210	15,639	28,508	—	—
Average, 1865-72	31,026	1,955	3,563	63·0	114·8

If you will look at this table you will find that the diseases are classed under two heads: (1) Primary venereal sores. (2) Gonorrhœa. With regard to gonorrhœa, it is specifically admitted in p. 12 that the Acts have had no beneficial effect, and that no reduction has been effected in that form of disease.

In the "Navy Medical Reports" for the years 1866 to 1874, column 2 of tables, on pp. 43, 1866; 39, 1867; 31, 1868; 22, 1869; 30, 1870; 28, 1871; 24, 1872; 25, 1873; 28, 1874, gives the ratio per 1,000 of force of admissions for gonorrhœa as follows:—

1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.
20·4	22·2	32·4	38·7	48·9	50·3	64·6	51·1	53·5

Showing that in the home navy, which is under the "*protection*" of the Acts, gonorrhœa has more than doubled.

I will, therefore, dismiss from consideration the figures concerning gonorrhœa in the army and navy with this passing criticism:

A system is propounded and tried for the reduction of a certain disease, with the expectation, the not unnatural expectation, that it will reduce both forms of that disease. The result shown is that in the army it has effected no decrease of one form of disease, whilst in the navy that form is more than doubled. And although there is some attempt in the navy reports to account for that large increase, in neither army nor navy reports is any attempt made to give any scientific explanation of the fact, that with regard to one of the two forms or classes of disease the Acts are *entirely inoperative.* It is not to be supposed that there is no explanation for this very remarkable fact; and that explanation ought to be offered whichever way it may tell; and until it is offered I feel entitled to say that the reduction shown in the tables of the other form or class of disease must be held altogether uncertain and inconclusive evidence of an hygienic effect.

Let me take the other column. That column shows a considerable decrease in the admissions to hospital per 1,000 men since the Acts were in force. But the reduction is not accurately and fairly shown. On the next page you will find the table and this column thus explained:—"In 1864, the year in which a contagious "diseases Act was first passed, and the year before it came into "operation, the admissions into hospital at these twenty-eight stations "were in the ratio of 108·6 for primary venereal sores, and 112·5 for "gonorrhœa, per 1,000 of mean strength. In 1872 the admissions "were 54·2 and 104·0 respectively at the fourteen stations under the "operations of the Act, showing a reduction of 54·4 per 1,000 in "primary venereal sores, or that form of disease which is likely to "produce great constitutional deterioration, and of 8·5 per 1,000 in "gonorrhœa." (Report, 1872, p. 11.) Now this reduction in venereal sores is calculated to suggest to the mind a large saving in the efficiency of the army. But this is a suggestion which is unscientific, because it is at the same time uncertain and exaggerated. For the true proportions of this saving—its real value—we must look to other figures.

And first we must not go back to 1864; for the Act of 1864 was only very partially applied. If you look at the table you will find no more than 7,393 men under its operation. It was only capable of being put in force against women suspected of being diseased, it provided no register nor any periodical examination, and it was repealed by the Act of 1866.

But we know exactly when the present Acts were put in force at the different stations, and the following are the facts and dates taken from the "Army Medical Report," for 1868, p. 258; for 1869, pp. 41 and 43, and from "Report of Royal Commission," p. 797, Table XII.

Devonport and Plymouth	10th	October,	1866.
Portsmouth	8th	,,	,,
Chatham and Sheerness	6th	November,	,,
Woolwich	6th	,,	,,
Aldershot	12th	April,	1867.
Windsor	1st	,,	1868.
Shorncliffe*	24th	July,	,,
Colchester	27th	January,	1869.
Winchester	6th	,,	1870.
Dover	19th	,,	,,
Canterbury	21st	,,	,,
Maidstone	15th	,,	,,
Cork		June,	1869.
Curragh	6th	December,	,,

The comparison ought therefore to begin with the year 1867, though I have always started with the year 1866, and this reduces the starting number as to primary venereal sores from 108 to 90, which is the figure that I have always assumed.

But the department does not appear to have been content even with the starting point of 108. For in the following year's report we have another table with the figures more dramatically but still less scientifically grouped. And this table was produced on the very eve of the Parliamentary discussion of last year.

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* Royal Commission gives 27th July for Shorncliffe.

TABLE I.—*Showing the Admissions into Hospital for Primary Venereal Sores and Gonorrhœa, at Twenty-Eight Stations of Troops in the United Kingdom in each Year.*

Year.	Stations never under the Acts.					Stations ultimately brought under the Acts.				
	Average Strength.	Primary Venereal Sores.	Gonorrhœa.	Ratio per 1,000.		Average Strength.	Primary Venereal Sores.	Gonorrhœa.	Ratio per 1,000.	
				Primary Venereal Sores.	Gonorrhœa.				Primary Venereal Sores.	Gonorrhœa.
1860	17,118	2,292	2,374	134	139	57,479	8,405	7,966	146	139
'61	17,126	2,049	2,023	120	118	51,328	7,267	7,133	142	139
'62	15,026	1,500	2,070	100	138	45,322	5,314	6,283	117	138
'63	15,132	1,612	1,816	107	120	43,419	4,653	5,202	107	120
Totals of 4 years	64,402	7,453	8,283	—	—	197,548	25,639	26,584	—	—
Avge., 1860-63	16,100	1,863	2,071	116	129	49,387	6,410	6,646	130	135
1864	14,894	1,647	1,636	111	110	40,694	4,135	4,803	102	118
'65	14,091	1,418	1,968	101	140	43,078	4,077	4,937	95	115
'66	14,595	1,154	1,663	79	114	39,476	3,444	4,573	87	116
'67	20,589	2,372	2,670	115	130	39,911	3,640	5,274	91	132
'68	19,486	2,130	2,236	109	115	42,595	3,533	5,685	83	133
'69	17,739	2,273	1,856	128	105	42,017	2,765	4,466	66	106
Totals of 6 years	101,394	10,994	12,029	—	—	247,771	21,594	29,738	—	—
Avge., 1864-69	16,899	1,832	2,005	108	119	41,295	3,599	4,955	87	120
1870	17,852	2,022	1,723	113	96	41,580	2,268	4,081	54	98
'71	19,957	1,865	2,137	93	107	54,096	2,763	6,254	52	115
'72	19,950	2,457	2,113	123	106	50,794	2,752	5,280	54	104
'73	19,801	2,025	1,888	102	95	48,039	2,420	3,946	50	82
Totals of 4 years	77,560	8,369	7,861	—	—	194,509	10,203	19,561	—	—
Avge., 1870-73	19,390	2,092	1,966	108	101	48,627	2,551	4,890	52	101
1874	18,879	1,661	1,450	88	77	48,136	2,039	2,968	42	62

Note.—In the years from 1860 to 1866, inclusive, Windsor has been omitted from the stations under the Acts, and London from those *not* under the Acts, as the returns do not afford this information.

In this table, which will be found in the return for 1873, p. 12, you will see that the comparison attempted is with the average of a certain number of years before the Acts; but as the decrease in the proportion of disease was continuous during that period, the comparison should have been at any rate with the last figure which it contains, because the whole of that decrease must have been owing to causes independent of, because anterior, to the Acts.

But the most serious criticism which I have to make upon this table—and I think it is a serious criticism—is this. The average number of admissions per annum per thousand in stations under the Acts in the second group of years is 87, and that reduced figure is reached in the year 1866. If you turn to that year you will find that the number of men is stated at 39,476; but if you will go back to the prior table, that in the report for 1872, you will discover that at this date the Acts were only in operation with regard to 10,161 out of these 39,476 men, and that with regard to these 10,161 men the fall had been not, as in the average of the whole, to 87, but only to 90·5 per 1,000. I submit, therefore, that so far as these statistics have produced the impression of a reduction in number of admissions from a higher starting point than that of 90 per 1,000, which has always been my starting point, that has not been by virtue of a true and scientific grouping of the figures with which they deal.

The gain to efficiency in the home army may be fairly calculated if we will take the trouble to do it for ourselves.

The following table will be found as "Table II" in the return for 1872, p. 10:—

TABLE II.—*Showing the Number constantly in Hospital with Primary Venereal Sores, at Twenty-Eight Stations of Troops in the United Kingdom, in each Year from* 1868 *to* 1872 *inclusive.*

Year.	Under Acts.			Not under Acts.		
	Strength.	Primary Venereal Sores.	Ratio per 1,000.	Strength.	Primary Venereal Sores.	Ratio per 1,000.
1868	27,770	141·38	5·09	34,311	275·65	8·03
'69	32,355	158·10	4·89	27,401	258·04	9·41
'70	41,580	185·58	4·46	17,852	173·87	9·74
'71	54,096	210·43	3·89	19,957	161·09	8·07
'72	50,794	231·55	4·56	19,950	225·21	11·14
Totals	206,595	927·04	—	119,471	1093·86	—
Average	41,319	185·41	4·49	23,894	218·77	9·16

From this table it will be seen that in 1868, with 72 admissions per 1,000 men in respect of primary venereal sores, the ratio of men constantly in hospital was only 5·09 per 1,000, a proportion which will serve incidentally to show how slight must have been a large proportion of these attacks.

In 1872, when the admissions were reduced to 54·2 per 1,000, that ratio of 5·09 was only reduced to 4·56, which means a saving in those five years of the operation of the Acts of exactly half a man per thousand. Say there are fifty thousand men out of a home army of eighty-five thousand under the Acts, that is neither more nor less than a saving of twenty-five men out of the whole of that home army.

If you go farther back to my starting point, the year 1866, when the number of admissions was 90·5 per 1,000, you will increase the saving, though the returns do not enable me to say to what extent, but you will see that the margin is small, and that the result is insignificant at best.

But my next charge is more serious.

I arraign the classification of disease with reference to the more important branch of this double problem. The great object of this legislation, generally admitted to be essential to its justification, is the reduction, if not the "*stamping out*" of that constitutional, that true syphilis, which permanently taints the constitution of the man himself, and possibly of his children yet unborn.

But what light do these returns throw upon this question—upon the reduction of constitutional disease?

If a reduction in admissions to hospital per 1,000 men in respect of primary venereal sores of from 90 to 54 in a certain number of years be shown, what effect does that imply upon constitutional disease?

There is not the least attempt in these tables to help us to this essential conclusion. But the figures are left to tell upon the unscientific and popular mind as if the reduction from 90 or more to 54 meant something approximating to an equivalent reduction in constitutional disease.

Surely statistics do not fully perform their function which do not attempt to throw any true light on the more important of the two allied problems which they profess to elucidate.

I can get at some approximation to the true figures, but I have to look elsewhere and dig them out for myself, and what do I find?

The Acts apply now to some 50,000 out of 85,000 men at home, and I find that in 1866 the number of admissions into hospital in respect of secondary or true or constitutional syphilis in the whole home army were 23·39 per 1,000, and in 1872, 24·26. That is to say that no reduction of that really serious disease had taken place in the home army, but a slight increase. These figures are thus found from the tables on p. 188 of "Army Report" for 1866, and p. 458 of the Report of 1872. The heads of the tables supply the data for ascertaining the strength of the army, and the lines which follow the words "secondary syphilis" supply the number of admissions to hospital. They are as follows:—

Strength in 1866 .... 59,758, and admissions 1,398
„ 1872 .... 85,722 „ 2,080

And I say, that scientifically the tables put forward for our instruction on this subject do not bring out into relief these facts, which are the best evidence of the efficiency or inefficiency in respect of one of its main purposes, of this legislation; whilst popularly the light they throw is false, and leads to the erroneous impression of large and favourable, and promising results.

These criticisms would not be complete without adding the figures of permanent invaliding for syphilitic disease in the home army and navy. In 1866, out of the home army of 60,000 men, 43 left the army invalided from this cause, and at that time only 10,000 of the 60,000 were in the protected districts. In 1872, 96 were invalided out of a total of 85,000, of whom no less than 50,000 were supposed to be protected. That is to say, during these six years the increase in permanent invaliding, consequent on these diseases, was from 7 to 11 per 10,000.

The average invaliding for secondary syphilis for the years 1863 to 1866 inclusive was 11 per 10,000 men, and for the years 1867 to 1873, 12 per 10,000.

In only one year was there so much as 1 man in 10,000 invalided for primary syphilis, and that was in 1872, when 3 men per 10,000 were entered on the table under this head, *i.e.*, 29 men were invalided out of the home army of exactly 85,722.

These figures are reckoned from the tables headed "Abstract "No. 1," in the appendices of the "Army Reports" for the years referred to. Prior to 1863 the column "Invalided" was not given. I have put 1866 *before* the Act in this calculation, because it was not introduced to any district until near the *end* of that year.

With regard to the navy, in 1866 22 men were invalided out of the total of the home navy of 21,000 men, but in 1872, 42 were invalided out of a total of 23,000.

The average invaliding in the home navy for syphilis for the years 1860 to 1866 inclusive was 11 per 10,000 men, and for the years 1867 to 1873, 11 per 10,000 men.

Until 1866 "primary" and "secondary" were not separated in the table.

The proportion of the invaliding including and since the year 1866, is 1¾ per 10,000 men on account of primary, and 8¾ per 10,000 on account of secondary.

These figures are calculated from the first table at the end of "*Home Stations*," "Navy Medical Report," for the respective years.

I must add another criticism, although it is of minor importance.

In these reports themselves, and in the medical journals, the second class of venereal disease, entitled "Primary Venereal Sores," is not unfrequently presented and discussed as if primary venereal sores meant primary syphilis. It is spoken of for instance in the Report for 1872, p. 11, as "*that form of disease which is likely to pro-* "*duce great constitutional deterioration*," and on p. 12, as "*the far* "*more serious form of venereal disease, from which constitutional* "*contamination and ultimate inefficiency so often result.*"

But I believe that this second class and column contain a proportion of cases, which, so far from being more serious, are less serious and less troublesome than gonorrhœa, and are not syphilitic in the least. They may be mere abrasions.

It appears to me, therefore, speaking of the "Army Medical "Reports," that they do not meet the requirements of my second proposition, and that the terms they use are not sufficiently exact; that their grouping of figures, of facts, and of dates is neither logical nor consistent, *i.e.*, unvarying in the idea which governs such grouping, and that their classification of disease is not scientific for the purpose, *i.e.*, not calculated to throw the truest and clearest light on the problems which they profess to elucidate.

My third proposition was that statistics must be reliable. It seems almost childish to enunciate so self-evident a proposition. And yet it is necessary, because these Government statistics are confessedly unreliable, and therefore, all other questions apart, are not of any sufficient scientific validity.

Cases of admission to hospital are not necessarily identical in number with cases of actual disease. There will always be some margin of cases which escape notice, and if the proportion were small and constant, we might without difficulty admit, in a series of years, the number of admitted cases year by year as sufficiently accurate evidence of the progress of the disease itself.

But in this case we do not know the proportion of concealed cases, but we do know that that proportion has been varying, and that it is altogether uncertain, and I will prove this from admissions in the army and navy reports themselves.

The "Navy Report" for 1874, p. 19, contains an apology for the large increase of gonorrhœa in the home stations, apparently consequent on these Acts, as follows:—"The influence of the Act on "gonorrhœa and its sequelæ is animadverted on by the opponents "of the Act, and an effort is made to show that it has utterly failed "in its results. Gonorrhœa, however, is a simple, local, inflammatory affection, which only rarely creates permanent or temporary "local changes, and it is, as compared with syphilis, of little or no "importance. Previous to the operation of the Contagious Diseases "Act, this disease (gonorrhœa) was thought so little of, that many "cases existed of which no notice was taken, simply because the "men, unwilling to be subjected to the comparative restrictions of "the sick list, concealed the existence of the disease, and treated "themselves or applied for treatment to persons on shore. When "the Act was passed, a circular issued by the Admiralty with "reference to these affections, had the effect of bringing a large "number of cases under the observation of the medical officers, "which certainly would otherwise never have been seen; and this "has given rise to the assertion that gonorrhœa has increased as a

" consequence of the Act being established—an assertion which to " the professional man carries absurdity on the face of it."

Will any statistician say that this is not an admission very damaging altogether to the reliability of the navy statistics?

Disease is divided into two classes. In the one class a large increase is shown apparently consequent upon the Acts. An explanation is at last offered, and it amounts to this, that the statistics of this gonorrhœa column, which are unfavourable to the Acts, are not reliable. But if this be so, how are we to know, or why are we to believe or take it for granted, that the statistics of the second column of "primary venereal sores," which show a reduction, are more reliable than the first. I will add, that I do not believe them to be more reliable, and for this reason, amongst others, that the slighter cases are positively more easy to conceal. But I ask whether any scientific body can accept as scientifically reliable, Government statistics upon the face of which such an admission of unreliability is made?

But if the navy statistics are invalidated, what of the army medical returns? I have endeavoured to explain what these statistics show. They show (1) no reduction in gonorrhœa; (2) a reduction in number of admissions to hospital in respect of primary venereal sores of from 90·5 to 54 between the years 1866 and 1872, and I have also endeavoured to demonstrate how little that means in saving of efficiency, and how utterly irrelevant it is to the most vital question of all, viz., the reduction of constitutional disease; and (3) by reference to other figures dug out of those reports I have shown how these Acts have been without any influence on constitutional disease.

But I stopped at 1872, and now I will go further.

In 1873 there are symptoms of a marked change—a sudden and rapid fall. In the stations under the Acts gonorrhœa falls from 104 to 82, and in the next year (1874) to 62. The cases of primary venereal sores fall from 54 in 1872, to 50 in 1873 per 1,000, and to no more than 42 per 1,000 in 1874. You will find these figures for 1874 in the second table to which I have referred, which is printed in the report for 1873, p. 12.

When you find so sudden a change and fall as this, you will I am sure, without the need of any suggestion on my part, have immediately surmised the existence of some new and disturbing cause, and you will have been right in so doing.

In October, 1873, a royal warrant was issued, directing that the pay of soldiers should be suspended during their stay in hospital, and the effect was instantaneous.

As to the fall in gonorrhœa in 1873, the "Army Medical " Report" for that year has this statement (p. 3):—" There is reason " to believe that the fall in the rate of admissions for gonorrhœa in

" 1873 is connected with the issue of the Royal Warrant in the month " of October of that year, directing that the pay of soldiers admitted " into hospital with venereal disease should be forfeited during their " stay there;" and the same Report (p. 13), referring to the table which includes the figures for the year 1874, says, " For the " decrease in the ratios of both groups in 1874 there is a probable " explanation. In October, 1873, a Royal Warrant was promul- " gated, directing that soldiers admitted into hospital on account of " venereal diseases should forfeit their pay whilst under treatment. " It is presumed that this led to concealment of those diseases."

I make no doubt that you will agree with this presumption; but I think you will go farther, and that you will be of opinion that these suggestions of past or present concealment of disease in the army and navy are admissions which rob of all reliable validity the Government returns, and that there is no sufficient justification for any assumption that the statistics are accurate, exhaustive, and reliable, except only where the respective departments assert or admit their unreliability.

My fourth proposition is: that the results which they present more or less in statistical form, must be in reality results of the legislation whose effects they propose to demonstrate, and not mere coincidences which may be due to other causes.

And this brings me in the first place to a still further qualification of the figures of the army medical reports, considered as evidence of the hygienic operation of the Contagious Diseases Acts.

The following table shows, I think, clearly the dynamics of disease in each station before and since the year and the month of the application of the Acts to each station; and in most of the principal stations it tells of a reduction in the ratio of fall since the operation of the Acts. If I were to argue that the Acts had, therefore, positively retarded the reduction of disease, I should be falling into precisely the same error as that of those advocates of the Acts, who attribute all reduction of disease since the Acts, to their operation, *post hoc ergo propter hoc.* I do not cite the reduction in the rate of fall as proof of any such proposition, I confine myself to this, that at least some portion of the prior fall would have continued, and that therefore after making all needed corrections of statistics, it would still remain true that only a portion of the fall subsequent to the Acts, and that an uncertain portion, could be properly attributed to their operation.

Another purpose which this table may perhaps serve, is to show the great and often sudden variations in disease at some stations, variations which point to the operation of other causes than the existence or non-existence of Contagious Diseases Acts.

Primary Venereal Sores. Average Annual Rise or Fall per Cent. in the Rate of Admissions to Hospital in Fourteen Stations now under Acts. Figures underlined thus ~~~ represent a Rise, other Figures a Fall.

Date of Application of Acts.	Stations.	Year.														Average before Year of Acts.	Average including and since Year of Acts.	Average before Month of Acts.	Average including and since Month of Acts.
		1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.				
10th Oct., 1866	Devonport and Plymouth ...	25·15	26·63	15·07	11·29	20·9	38·34	7·31	13·15	12·12	21·62	13·79	18·0	37·28	2·7	1·55	11·56	6·35	9·13
8th " '66...	Portsmouth	11·17	22·14	17·69	13·08	6·61	11·5	16·0	25·86	27·9	17·74	19·6	2·44	10·0	9·09	8·9	7·77	9·25	7·43
6th Nov., '66	Chatham and Sheerness ...	3·77	11·76	4·44	63·83	2·27	3·49	14·45	11·26	34·92	14·63	38·29	24·61	16·32	19·51	15·44	7·96	13·73	8·41
6th " '66...	Woolwich	25·8	3·62	27·81	16·66	5·0	17·1	1·12	47·72	13·04	17·3	34·88	3·44	—	21·66	17·78	2·15	11·08	4·11
12th April, '67...	Aldershot	14·84	21·09	5·17	4·54	4·76	19·0	—	4·93	18·18	6·34	2·98	4·61	16·12	27·77	6·62	4·5	6·35	4·64
1st " '68...	Windsor	(No separate account for these years)							134·47	31·61	27·95	16·41	23·07	12·5	25·0	—	10·98	—	11·39
24th July, '68...	Shorncliffe	6·87	46·72	24·61	1·23	17·07	16·17	26·31	83·33	22·07	66·66	70·0	10·0	36·36	33·33	12·47	0·25	6·08	6·68
27th Jan., '69...	Colchester.........	20·71	17·91	17·72	9·23	9·32	61·68	16·18	25·51	53·29	50·58	23·81	71·87	23·63	52·38	3·99	21·97	3·99	21·97
6th " '70...	Winchester	18·18	60·6	36·47	9·9	35·13	36·11	13·04	100·0	2·88	39·6	52·45	96·55	52·63	40·74	6·08	1·48	6·08	1·48
19th " '70...	Dover...............	1·31	31·33	4·85	8·16	25·55	34·32	44·66	15·9	27·92	62·5	20·0	95·83	19·14	2·63	3·78	1·69	3·78	1·69
21st " '70...	Canterbury	73·17	25·35	28·3	50·0	13·23	51·94	1·7	4·2	60·52	237·77	75·0	13·15	53·48	80·0	3·14	40·48	3·14	40·48
15th " '70...	Maidstone.........	67·92	35·29	263·63	53·75	378·37	21·46	74·1	49·58	4·91	46·87	35·29	29·55	3·5	11·86	54·78	7·45	54·78	7·45
June, '69...	Cork	1·66	7·62	11·92	20·83	13·15	43·02	46·93	15·27	19·67	6·84	19·11	12·72	1·61	57·37	5·03	8·75	3·8	10·87
December, '69...	Curragh............	16·37	23·77	11·92	5·73	24·8	20·61	35·06	18·26	3·53	36·36	37·5	42·85	40·0	53·33	6·39	2·36	5·37	3·41

Note.—The thick irregular line through the table marks the *year* of the introduction of the Acts in each station.

These figures are calculated from the statistics furnished by the War Office to Dr. Nevins for the years 1860-63 (see Dr. Nevins's "Statement," pp. 38 and 85), and for the years 1864-74 from the tables on p. 258, "Army Medical Report" for 1868, and p. 12 of the Report for 1874.

The stations which were under the Acts in 1866 show an average of—

Fall before the *year* of Acts of 10·92 per cent., and after of 7·36 per cent.
„ *month* „ 10·1 „ 7·29 „

that is to say, the fall from 1860 to 1866 was 3½ per cent. more than that from 1866 to 1874, or nearly 3 per cent. more if the time be divided at the *month* of introduction; or the fall before and after the Acts was in the ratio of about 4 to 3.

These stations are Devonport and Plymouth, Portsmouth, Chatham and Sheerness, and Woolwich. The two camps, Aldershot and Shorncliffe, show an average of—

Fall per annum before the *year* of Acts 9·54 per cent. and after 2·37 per cent.
„ *month* „ 6·21 „ 5·66 „

i.e., the fall in these camps before the year that the Acts were introduced to them was 7·16 per cent. per annum more than subsequently, or before the month 0·55 per cent. per annum more; or the fall before and after was in the ratio of 4 to 1, reckoning from the *year* of introduction, or 11 to 10, reckoning from the *month* of introduction.

Or if Aldershot and Shorncliffe be taken separately, the figures would be: at Aldershot the average fall per annum before the *year* of the introduction of the Acts was 6·62 per cent., and after, 4·5 per cent., or reckoning from the *month* of introduction, 6·35 per cent. before, and 4·64 per cent. after. At Shorncliffe the average before the *year* of introduction was 12·47 per cent., and after 0·25 per cent., or reckoning from the *month* of introduction, 6·08 per cent. before, and 6·68 per cent. after.

But in this connection the reports to which I especially desire to ask attention are the police reports.

These reports contain statements and figures concerning the reduction in number of brothels and of prostitutes, especially of juvenile and of clandestine prostitutes, in the districts subject to the Acts, which they persist, without, as I think, any justification whatsoever, in attributing to the operation of these Acts; and this I will endeavour now to show.

I will deal first with the reduction of brothels. For the sake of brevity I will not refer to the tables which contain the statistics of this reduction in detail; but I will take the report of Captain Harris, Assistant Commissioner of Police, which precedes those tabular statements for the year 1874. It contains the following statement, p. 6: "The number of brothels (*see* Return, No. 3) has "been reduced this year by 85, showing a total decrease of 678 "brothels that have been suppressed within the protected districts "since the Acts came into operation."

The implication in this statement, and similar statements are to be found in the reports of almost every year, is clear. It is that the reduction of brothels has been a consequence of the operation of the Acts. But it is no part of the object of the Acts to suppress brothels or to reduce their number. The Acts contain no powers whatsoever, conferred on the metropolitan, or any other police, for the suppression of brothels; and that reduction, whatever it may be, and however it may have been effected, cannot therefore be due to the existence of these Acts, which operate solely to secure the registry of prostitutes, their periodical examination, and their treatment in hospital when found diseased.

I might question the accuracy of the figures; indeed, as far as the Devonport district is concerned, I believe the figures under this and other headings to be more than questionable. But that would be a minor issue which I do not wish to raise to-day.

But, assuming the figures to be accurate, I will give another reason why it is altogether an assumption to suppose the reduction shown to be either directly or indirectly a consequence of the Acts. And the reason is this, that throughout the country there has been a general reduction in number of brothels and houses of ill-fame during the same period, as will be evident from the following quotation from an official "Memorandum (C. 665) as to the "decrease of crime in England and Wales, presented to both "Houses of Parliament, by command of Her Majesty," issued and dated from "Whitehall, 1872," and signed "A. F. O. Liddell."

Table I.—*England and Wales. Number of Houses of Known Bad Character as Returned by the Police in each of the undermentioned Years.*

Years.	Resorts of Thieves and Prostitutes.			
	Public Houses.	Beershops.	Coffee Shops.	Brothels and Houses of Ill-fame.
1867	2,123	2,034	355	6,614
'68	2,037	2,117	332	6,482
'69	1,921	1,930	346	6,287
'70	1,498	943	383	6,000
'71	1,280	758	262	4,666

Table II.—*Metropolitan Police District.*

Years.	Resorts of Thieves and Prostitutes.			
	Public Houses.	Beershops.	Coffee Shops.	Brothels and Houses of Ill-fame.
1867	164	95	109	1,123
'68	141	96	101	1,028
'69	127	104	101	1,064
'70	114	56	163	961
'71	90	34	72	796

But I have some further evidence.

Dr. J. Birkbeck Nevins, of Liverpool, who has given much time and attention to this subject, recently addressed a letter to the Home Secretary, containing the results of an inquiry which he himself had instituted into the condition of prostitution, and the alleged influence of the Contagious Diseases Acts.

Dr. Nevins says:—

> "The reduction in the number of brothels and prostitutes in the towns subjected to the Contagious Diseases Acts has been prominently urged by the advocates of the Acts as a strong reason for their maintenance as in force at present, and for their extension to the civil population generally. This reduction occupies a very prominent position in Captain Harris's annual report, where it is claimed as 'the '*operation*' of the Acts; and in the late debate in the House of Commons, the advocates of the Acts dwelt more strongly upon the moral benefits now attributed to them than upon the sanitary benefits in the army and navy, which have recently been so seriously discredited.
>
> "The opponents of these Acts allege, on the other hand, that the Acts do not contain a single provision in the direction of improved morality, except the appointment of a chaplain in lock hospitals, that they give no authority whatever to the special police over the conduct of either brothels or prostitutes, and that the reduction of both these classes, and also the improved decency in the streets of the subjected towns, are due to the action of the local police and the ordinary borough police laws, and, therefore, furnish no reason either for the maintenance or the extension of these Acts.
>
> "The assertion and the denial that this reduction is due to the special police under the Contagious Diseases Acts have been alike mere assertion, owing to the absence of authentic data as to the influence of the ordinary police in towns not subject to these Acts; and in order to obtain the means of arriving at a well-founded opinion, based upon data at once sufficiently extensive and authentic, I recently addressed a copy of a circular and the subjoined form* to the chief constables of twenty-one (all the large) seaports, and of eighteen important inland towns in Great Britain and Ireland, requesting information as to the state of prostitution in 1866 (the date of the Acts) and 1874 (the date of Captain Harris's latest report to Government upon the subjected towns), and adding that I should communicate the results to the Government. The circular was sent to the chief constables of the towns enumerated in Table III. In selecting these towns, it has

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*[FORM.]

State of Prostitution in , *in the Years* 1866 *and* 1874.

Date.	Population of Place.	Number of Brothels.	Houses of Accommodation.	Publichouses Harbouring Prostitutes.	Total.
1866............					
'74............					

Date.	Population of Place.	Total Number of Prostitutes.	Number under 15 Years of Age.	Number under 18 or 20 Years of Age.	Number of Convictions of Prostitutes for Disorderly Conduct.
1866............					
'74............					

been desired to make them, as far as possible, representative of the country at large, by fixing upon—

The Metropolis—London.
Metropolitan Towns—Dublin, Edinburgh.
Agricultural—Exeter, Ipswich, &c.
Cathedral—York, Norwich, &c.
Hardware—Birmingham, Sheffield, &c.
Manufacturing—Manchester, Paisley, &c.
Pottery—Leek, Staffordshire.
Public Schools—Rugby.
Universities—Cambridge, Oxford."

And, with reference to the tables which he appends, he adds:—

"From Tables I and II it appears that in the districts under the Acts, with a population of about 740,000 in 1874, the number of brothels has been reduced by the local police, with whatever assistance the special police may have rendered, from 953 to 439, or in the proportion of 100 to 47·0; and in the towns *not under the Acts*, with a population of nearly four millions, the number of brothels has been reduced by the local police alone from 3,758 to 2,135, or in proportion of 100 to 56·1."

I do not, let me say, quote either the statistics of the "Memo- "randum" respecting the decrease of crime, or Dr. Nevins's statistics for the sake of exact comparison, but as being sufficient evidence of the fact that a general reduction in the number of houses of ill-fame has been in operation for some years in England, and as an additional proof that there is no justification for attributing that reduction in the subjected districts to the operation of the Contagious Diseases Acts.

The next statement of Captain Harris to which I call attention is in the report for 1872 (p. 10), and regards the reduction of the number of prostitutes. It is as follows:—

"The reduction in the number of known common women in the "various districts (as compared with the number of known common "women practising prostitution in each respective district at the "time the Acts were first put in operation) is from 4,852 to 2,290 "at the present time; thus showing a decrease of 2,562 since the "Acts have been in operation."

Judging from continental experience, one effect of such legislation as the Contagious Diseases Acts is, in my opinion, likely to have been, and to continue to be, a reduction in the number of registered prostitutes and an increase of clandestine prostitution. It is not easily to be believed that legislation which raises the status of sexual vice, and which professes to provide for its safe indulgence, should do otherwise than stimulate the demand for prostitutes, and I fear that I am only too well entitled to assume that in such case the usual economic rule would apply, that demand would in some form or other beget a corresponding supply.

Nevertheless I am convinced that these figures cannot be justified, much less the assertion that the reduction which they show is a *consequence* of the operation of the Acts in the sense of being a justification of their policy.

My first objection is that the initial figure of 4,852 is unreliable and probably exaggerated, and I will give two reasons, and I shall borrow these reasons from two ably-written, and I think reliable, pamphlet criticisms on these reports, issued by the managers of certain metropolitan reformatories and rescue societies.

The first reason is that the figure 4,852 is not obtained by taking the gross supposed numbers of prostitutes in these districts in any given year, say 1865 or 1866, as in the case with the number 2,290 of the year 1872, but by adding together the numbers of supposed prostitutes in these districts in the years respectively in which the Acts were first brought to bear upon them; and the force of this criticism depends on the probability that these women would, in the first instance, tend to migrate from districts in which the Acts were in force, to those in which they had not been introduced, and where they might hope to be exempt from police interference; so that their numbers would be at a maximum at those dates, and that a proportion of them would be reckoned twice or oftener.

The second objection, derived from the same source, is this: that the earlier figure is only an estimate, without particulars or check, of the number of women supposed or suspected to be leading a life of prostitution, and who were not ascertained or dealt with by any legal process whatsoever, and this is especially true until the Act of 1866 was brought into operation, because under the previous Act of 1864 there was neither register of the names nor periodical examination of the women; and the probability of error in the calculation—to use a moderate phrase—is enhanced and illustrated by the fact that in the notorious case of the Devonport district the estimate implied that every eighth unmarried woman in that district between the ages of 14 and 35 was a notorious and public prostitute.

I may add that the comparison could only be accepted as accurate on the assumption first, that the original estimate was exact and the method of arriving at it fair, and second, that no portion of the number reduced remained in any portion of any of these districts in the ranks of clandestine prostitution.

That there has been reduction in the number of registered prostitutes I do not doubt, and I have assigned reasons for the antecedent probability of such reduction. But in further illustration of my argument that any such real reduction is not as a matter of course to be attributed to the operation of the Acts, I would again refer to Dr. Nevins's return, which, taking the years from 1866 to

1874, shows that an almost identical reduction is reported from towns not subjected to these Acts. The result being this, in Dr. Nevins's words, that "in the towns *under the Acts*, Prostitutes," which here means registered prostitutes, "have been reduced from "2,569 to 1,394, *i.e.*, from 100 to 54·2, and in those *not under the* "*Acts* from 8,504 to 4,833, *i.e.*, 100 to 56·8, a difference so small as "to be insignificant."

The next statements I have to quote are those with respect to clandestine prostitution. In the "Report" for 1873, p. 5, I find the following statement:—"The Acts have been fully enforced, and "*all women* following the calling of prostitutes have been placed on "the register, if they persisted in pursuing that course of life after "being cautioned by the police." (And on p. 6.) "Clandestine prostitution has been greatly reduced, no woman now being able to "misconduct herself for any lengthened period without being "cautioned by the police that if she does not alter her mode of life "she will have to attend medical examination."

The statement in the "Report" for 1874 is in the same words as quoted above from p. 5 of 1873.

To these statements I oppose the evidence of the managers of the reformatories and rescue societies. They say:—

> "But we have now to bring a grave charge against the Acts and their administration.
>
> "It is that this system of police espionage and interference with the delicate subject of the morality of the people, and of the whole question of the sexual relations, IS BECOMING PRODUCTIVE HERE, AS IT HAS EVERYWHERE ELSE, OF A LARGE AMOUNT OF CLANDESTINE PROSTITUTION, WHICH ELUDES SUPERVISION AND REGISTRATION, AND SPREADS DISEASE WIDELY AMONG THE POPULATION!!
>
> "The existence and increase of clandestine prostitution in the subjected districts have long been known to us, and may, indeed, be noticed by any shrewd observer who will visit these districts and remain long enough there to study the way in which it evinces its existence and extent.
>
> "But as a positive proof of the extensive existence of clandestine prostitution in the subjected districts, the managers of the Rescue Society of London are responsible for and will support the following statements. They have incidentally been placed in a very favourable position for dealing with the prostitution of the subjected districts, and have, since the year 1870, received under their care 346 women from these districts, none of whom have been brought to, or directed to them, by the intervention of the police! Of this gross number of 346, not less than 134 have been clandestine prostitutes, wholly unknown to and unregistered by the police! The managers append a list of these clandestine cases, giving the entries in their 'case-books,' the initials (allowing them to be traced), the age when received from a career of secret vice, and the age of first prostitution."

After giving the list with initials and references to their case books, the managers add the following table, to which they desire particular attention, as showing the increase of, and the dangerous sanitary character of, this widespread, undetected, and unregistered prostitution:—

	Fallen Women Admitted from the Subjected Districts.	Of whom were Clandestine and Unregistered Prostitutes.	Percentage of Clandestine to the Whole.	Clandestine who had been, or were, Diseased, when Received.
1870....	71	15	21	5
'71....	80	26	32	5
'72....	78	26	33	6
'73....	69	38	55	12
'74....	48	29	60	6
	346	134	—	34 or 26 per cent. of whole number of clandestine.

These facts are a verification of all the statements made as to the universal results of the strict police supervision of foreign cities, and of the actual confessions of the police authorities in charge of those systems of police supervision.

It is impossible to reconcile the two statements. The managers are more specific in their assertions than are the police in their reports; and they are impartial witnesses.

Similar statements are to be found in these reports with regard to the prevention of juvenile prostitution.

In the "Report" for 1872, p. 2, it is said:—"The reduction in "the total number of prostitutes, however, inadequately shows the "working of the Acts; this is more clearly demonstrated by the "reduction in the number of juvenile prostitutes. The number of "prostitutes in the different districts under the age of 17 on the "31st December last was nine (*see* Form No. 2); whereas in 1866, "when the Acts were first put in force (and in a limited district "only), there were 377 under that age."

The managers analyse these and other figures concerning the supposed number of juvenile prostitutes in the subjected districts at the time that the Acts were first brought into operation, and their subsequent reduction, and stigmatise them as unreliable and fabulous. But this analysis would be somewhat long and intricate to quote.

Their most unanswerable reply is, however, to be found in the list of 134 clandestine prostitutes already referred to within the subjected districts, wholly unknown to and unregistered by the police, whom since the year 1870 they have received under their care.

They give the ages when received; and I find that out of those 134 clandestine prostitutes, 66 were of the age of 17 years and under.

I submit, therefore, that the boasted reduction of brothels is a case of *post hoc ergo propter hoc;* that the reduction in general prostitution is a reduction in registered prostitution only as distinguished from clandestine prostitution, and that the figures are untrustworthy; and that the supposed great reduction, approaching to extinction, of clandestine and of juvenile prostitution is untrue.

I do not for a moment pretend to place the army medical, and the police statistics on the same footing.

I have stated explicitly the faults I have to find with the army medical statistics. I think them scientifically faulty and deficient for reasons which I have assigned. I find them not impartial, but constructed, classified, and grouped to support an existing policy in legislation; but I say nothing against their good faith.

I cannot, however, pretend to speak in similar terms of the police returns. They appear to me not only to fulfil none of the conditions of true statistics, but to be attempts to bolster up a policy of legislation and of administration by loose, unreliable, and exaggerated statements of so-called results which that legislation never contemplated, and which, so far as they may be true in fact, are not results which can be accurately and honestly placed to its credit.

Discussion *on* Mr. Stansfeld's Paper.

Dr. T. G. Balfour, F.R.S., said he gladly availed himself of this the first opportunity he had had since his return to England to make a few statements as to the reliability of the returns of the Army Medical Department on the subject of the Contagious Diseases Act, and before doing so he begged it to be distinctly understood that he, and he alone, was responsible for the returns up to the end of 1872. He was the more pleased to have this opportunity, because he found that during his absence from England, Mr. Stansfeld, at the meeting of the Social Science Congress, made a statement to the effect that the returns showed an evident bias on the mind of the reporter. That statement was very fully and clearly answered by his much lamented friend, the late Dr. Parkes, and he should not have now alluded to it but for the concluding paragraph of the present paper. He contended that the figures in the returns were perfectly impartial. He had worked at the statistics of the army for upwards of forty years. His first labour had been to condense the returns of twenty years of the health of the army; his last work was to organise the statistical department of the army, and to carry on the work of it for thirteen years, and he claimed that during the whole of that time not one single figure had been altered to suit his preconceived notions or support the opinions of any of the authorities on the face of the earth. In reference to the paper, he would be inclined to put the third proposition of the author as the first, namely, that the statistics must be reliable. If they were not so, any deductions drawn from them were not worth the paper upon which they were written. Mr. Stansfeld had said in reference to the report of 1873—for which he (Dr. Balfour) was not responsible—"In the following year's report we have another table with the figures more dramatically but still less scientifically grouped, and this table was produced on the very eve of the parliamentary discussion of last year." He thought it would probably astonish the Society not a little to find that this table was prepared by the Army Medical Department in answer to a demand from the House of Commons, and that the motion for its production, he believed, originated with Dr. Nevins. If, therefore, there was anything dramatic about it, it must be attributed to Dr. Nevins, and not to his (Dr. Balfour's) successor in the statistical branch of the Army Medical Department. Mr. Stansfeld complained of the want of scientific classification, but he (Dr. Balfour) avoided purposely all classification whatever of the diseases comprised in the returns under the Act. It appeared to him that the operation of the Act could only be tested by two diseases, primary venereal sore and gonorrhœa; and he thought the result had completely justified the course he adopted, because it was not known how the Act would operate. They had learnt by the inexorable language of figures that it had operated in the reduction of one of the forms of disease and not the other. Mr. Stansfeld complained that the returns did not explain the reason of this; but statistics only stated facts, and left the explanation to others. There was another point on which Mr. Stansfeld had attacked the figures. He said that "under the head of primary venereal sores were included a very large number of mere trifling abrasions." He (the speaker) was a member of Mr. Skey's committee, and they had taken the evidence of Paget, Laurence, Hutchinson, and a great many others of the most scientific men in the profession on the subject, and the result was that it was found there was not the slightest connection between the size of the sore and the occurrence of secondary disease, and that secondary symptoms followed a mere abrasion sufficiently often to prevent a distinction being made in the returns relative to the details between a hard and a soft sore. He should feel much indebted to Mr. Stansfeld if he could tell any means by which a distinction could be made between a slight abrasure which would not produce secondary disease and the slight abrasion which did. For his own part he professed ignorance on the subject. Mr. Stansfeld had also stated that the figures which had been published did not show satisfactorily a reduction in the amount of the disease. He maintained that they did. He quite agreed with Mr. Stansfeld that if year by year and station by station were taken they did not; but one of the elementary rules of statistics was this:—have sufficient numbers under observation and you will get proper results; take small numbers and you get no reliable result at all. They should endeavour, as far as possible, by extending the observations over large numbers to obviate the fluctuation of figures, and by including a sufficient period of time, to obviate the chance waves of disease. Mr. Stansfeld had adopted 1866 as his starting point; but he (Dr. Balfour) adopted 1864, because in that year there was an Act passed which brought about a certain reduction in the prevalence of venereal diseases among the soldiers, and he wanted to contrast the period when there was no Contagious Diseases Act in operation with the period when there was. He took 1864 as being the last year, because the Act came into operation so near the end of it that it could not be said to have any effect at all on the results of that year. He compared the amount of disease in that year with the amount at stations under the Act in 1872, and also the amount at stations under the Act during the whole time it was in operation, with that at stations not under the Act during the same period, and the result in all these cases was to show a very large reduction in the primary venereal sores, which, he maintained, was the disease the Act was intended as far as possible to suppress. In all these cases, therefore, he claimed good faith in what he had done, and he claimed also that the results as stated by him in the returns published by the Government, were accurate deductions from the figures. Mr. Stansfeld had also said that the returns did not show such a reduction of secondary syphilis as to justify the maintenance of the Act. There was a great difficulty in treating the question of secondary syphilis, because the army was continually on the move between protected and unprotected stations, and the difficulty was to say where the men contracted the primary disease from which the secondary disease had arisen, and it was impossible to draw a logical conclusion.

Dr. Farr: That is Mr. Stansfeld's contention.

Dr. Balfour said that might be so; but he maintained that the operation of the Act had reduced the primary disease from 108 to 53, or above one-half. Mr. Stansfeld had stated that "There will always be some margin of cases which escape notice." He was quite well aware that there was a certain proportion of cases that escaped observation; but he maintained that the proportion which escaped observation was the same at stations under the operation of the Act as at stations not under its operation, which circumstance ought to be taken into account in drawing conclusions. He would conclude by saying that all he claimed for the statistics during the time he was at the head of the department was perfect truthfulness.

Mr. W. H. Millar, who had worked at the army statistics under Dr. Balfour and other officers, stated he could corroborate all that gentleman had said as to their accuracy. Throughout the paper there seemed to be a sort of insinuation that the figures had been touched up; but, as far as he knew anything about them, that was not the fact.

Mr. Stansfeld said he had not the slightest intention to suggest the cooking of the figures, and he did not think he had given that impression.

Mr. W. H. Millar said he objected to the term "validity" of the statistics, and to the phrase "dramatically arranged," which had been made use of in reference to the second table, inasmuch as the headings of that table were exactly the same as those of the original table. The only alteration was the grouping of the years. The table was grouped into a period of four years in which there was no Act at all; then they came to six years in which the Acts were applied partially, which he submitted was fair; and then they came to four years in which the Acts were in force at all the stations. He did not think that was dramatic. The year 1874 was not included in the last group, because a royal warrant had come into force which altered the conditions. It was not the fault of the figures that the royal warrant was issued. It would have been an error if that year had been grouped with the other years. It was therefore put separately in all the statistics. The discrepancies alluded to were the consequences of comparing short periods and individual stations instead of taking the average of a period of years.

Dr. Charles Drysdale said that he would accept the great authority of Dr. Balfour in any remarks he had to make. Like Dr. Balfour, he, at one time, did not believe that the Acts would do any good; and then for a time he thought they had done some good; but he had returned again to his previous position, and he would tell Dr. Balfour why he had done so. He found in the first place that, if he took Mr. Stansfeld's statistics, it was perfectly clear that gonorrhœa had not in any way diminished since the commencement of the Acts. He thought Dr. Balfour would grant him that.

Dr. Balfour: Yes.

Dr. Drysdale said he would also ask Dr. Balfour kindly to concede him another point, that there was no improvement in *secondary* symptoms, as far as he knew, in the army, in which, he apprehended, were included all sorts of tertiary symptoms.

Dr. Balfour: Yes.

Dr. Drysdale said that the next point Dr. Balfour laid stress upon, and one which he thought was illogical, was, that there had been a decrease in what he called primary venereal sores. That, he begged leave to observe, was the most confusing statement that any statistician could lay down. In the first place he would remind Dr. Balfour that the question of the primary lesion of syphilis had lately been thoroughly argued out in the medical profession. There were two schools, from the members of one of which Dr. Balfour had quoted largely, namely from Sir James Paget and Mr. Jonathan Hutchinson, who were stars of the first European magnitude, but who did not at all, he submitted, represent the medical science of Europe on that question; and he thought Dr. Balfour would have done a very great deal of service to the army statistics if he had said in another column when the sores were soft sores and when they were hard. He himself had never found any great or insuperable difficulty in distinguishing these sores. Every person of experience in Paris easily distinguished the soft sore from the hard sore, in the same way as they would distinguish varicella or chicken pox from small pox. Hence the utter insufficiency of Dr. Balfour's army statistics. He did not think Mr. Stansfeld himself could understand this subject, because he was not a medical man. The only jury that could settle this question would be a medical one; composed indeed of a rather small body even of medical men. He had no hesitation in saying that a very large proportion of the sores mentioned by Dr. Balfour as being of immense importance, were nothing more or less than merely soft chancres, which were surely not sufficiently dangerous to become of national importance. In Paris, at the present moment, the soft sore had almost entirely disappeared from private practice, which probably arose from the way in which the Contagious Diseases Acts of Paris were there administered; so that even in the Hôpital du Midi there were only about 55 cases of it seen last year, among the patients of Dr. Charles Mauriac, when formerly there were about 800 or 900 cases. In 1865, 1,173 cases of soft chancre were seen at that hospital. In 1873 there were in that hospital 1,402 cases of gonorrhœa, 1,450 cases of syphilis, and only 625 cases of soft sore; but since that time the soft sore had occasionally almost disappeared for weeks. In 1865 the soft sores in the Hôpital du Midi were about four or five times the number seen in 1874; but there was far more gonorrhœa in the Midi Hospital of Paris now, than there was in 1864; and only about half the amount of syphilis was then seen. He would ask Dr. Balfour to take these facts into consideration. The French were much more able in this matter than the practitioner of this country, and had made their statistics far clearer than could be done in this country; and the consequence was that it seemed that whilst the soft sore could be got rid of by their method of Government registration it was utterly powerless to keep down syphilis, which had greatly increased during the last ten years in Paris. His friend, Dr. A. Fourniere, indeed, had told him in May last that, just as civilisation went on in Paris, syphilis increased year by year; and they had given up all idea of stamping out syphilis in Paris. He believed that the Acts had failed in their object, although he once thought that they had done some good. He considered such Acts to be hygienic failures, because they dealt only with one set, and caused clandestine prostitution. In answer to Dr. Balfour—

Dr. Drysdale said he did not think that true "soft sores" ever produced secondary symptoms by any chance whatever.

Mr. Robert Lawson (Inspector-General) said that Dr. Balfour had anticipated him to a considerable extent in the remarks he had to make, and he could confirm a good deal of what he had said from a different point of view, as he had to deal with the sick as they came into the military hospitals. The right honourable gentleman who read the paper had stated that there was a great deal of concealment of disease, while he believes that there must have been a great deal of trivial disease under treatment, because the cases lasted such a short period. Now, if there was a great deal of concealment of disease, the cases would run on until they became very serious. The men would then necessarily be obliged to report themselves, and it would be found out that concealment was going on. After having been in charge at Aldershot, and also at stations elsewhere, he had no hesitation in saying that concealment did not exist to any extent. He would also allude to a point that had not been mentioned. Among different bodies of men at the same place and at the same time subject to the same influences, a very great variation in the amount of disease would be found. At Aldershot at one time it became necessary for him to examine into the prevalence of disease in one particular regiment, and that he might not be led to any erroneous conclusions on that point, he thought it well to extend the examination to three other corps which occupied the permanent barracks right and left of this one, and to three others which were in the north camp. Most of these regiments were under observation for forty-four consecutive weeks. One was under observation for twenty-nine weeks and went away, and he could not continue the observations. Another was under observation for thirty weeks, and another for thirty-four weeks, and went away; the results were in each case reduced to the ratios per thousand per annum. In one of these regiments the ratio was 124 per 1,000 of admission from primary venereal sores, both soft and hard. In another regiment, which was in the next building, there were 42 per 1,000 in the same period; in the next regiment to that there were 84 per 1,000; and in the next one to that, 142 per 1,000. In the north camp, two miles away from the town, there were three regiments at the time. One of these had 114 admissions per 1,000, another 59, and the third only 23. These facts occurred in the same place, at the same time, and under the same external influences. The regiments contained about 500 men each. This at once showed that it was dangerous to attempt any inference from the statistics of a small number of men. A large number must be taken, so that the deviations from the mean in one direction in some might be, as far as possible, neutralised by the deviations from the mean in the opposite direction in the others. It showed that extreme caution must be used in attaching weight to returns for single years from small stations or from small bodies of men. There was another most important point which the right honourable gentleman had not mentioned. In Table I it was found that there was a large fluctuation in the ratio per thousand of primary sores at stations never under the Acts. In 1860, the ratio was 134; in 1866 it was 79; in 1869, 128; and in 1871 it fell to 93. There was another increase in 1872; so that here was a series of fluctuations following each other in stations which were never under the Acts, and where nothing was ever done to interfere with the progress of the disease. At the stations which ultimately came under the Acts there would be found the same reduction up to 1866. After that year there were indications of the reductions and subsequent rises, but to a very much less extent. The returns for the cavalry in this country from 1830 to 1847, long before the preventive measures of the Contagious Diseases Acts were in force, exhibit fluctuations similar to those that he had mentioned, so that it was the character of venereal disease to fluctuate from causes of which there was no cognisance, exactly as in the case of small pox and other diseases. In statistical investigations such periods should be embraced as would neutralise these fluctuations. As to the application of the Act, the table which had been described as dramatic was arranged so as to show the number of troops from 1860 to 1873 at the fourteen stations that were never under the Acts, with their admissions, and also the numbers and admissions at the fourteen stations that subsequently came under the Acts, so that the numbers in these two groups could be compared. Up to a certain period they were found to fluctuate very closely together, but after the Acts came into operation the fluctuations at the stations under the Acts were very much reduced; either group, which was sufficiently large to give a fair average, would enable the fluctuations in the stations embraced in it to be traced; and it would be seen that in those now under the Acts they went on, after 1866, as before. It further showed what would have been the probable amount of venereal disease at the stations under the Act if the Act had not been applied. This was a most important point, and one that should be made use of. It has been assumed that gonorrhœa has not been reduced by the Acts; this is a mistake. If a period of six years, from 1861 to 1866, before the Act applied was taken, the admissions per thousand at the stations never under the Acts were found to be 109·0; from 1867 to 1872 the number of admissions at the same stations was 110·2, which was virtually the same number. Looking at the other stations that came under the Act, it would be found that in the first period the number of admissions was 125·1 per 1,000; but during the second, when they were partially under the Act, the ratio diminished to 114·6 per 1,000. This was a small diminution; but it was a diminution in one direction as against no alteration in the stations never under the Acts. But this did not by any means show the whole effect. Dr. Balfour had not been in this country lately, and had not the opportunity of seeing those things. At Aldershot and other stations where the Act was in force, a man who had been three days absent was medically examined on his return for the purpose of discovering whether he was labouring under venereal disease of any sort, and all such cases were reported. From returns which he made from these reports, the number of cases of gonorrhœa imported from April, 1868, to December, 1871, inclusive, was 23·4 per 1,000. In the same period the amount of gonorrhœa at Aldershot was 95·2, and deducting the 23·4 from this it left 71·8 per 1,000 of cases traceable to infection upon the spot. Against this there were two slight corrections to be applied. In the first place there was a certain number of men away from the station for which an allowance of one-fortieth must be made; then, again, a certain number might have contracted the disease immediately before they left for which an allowance must be made. He calculated that if every man who was infected a fortnight before finally leaving be written off this would be more than fully covered. Making these two corrections the total number was 76·3 actually accounted for in the station as against 95 reported. This showed that under the influence of these Acts there had been a considerable diminution of gonorrhœa. As regards primary venereal sores, taking the two groups of stations given in Table I, the admissions from 1861 to 1866 were 114·1* in the stations never under the Acts, and from 1867 to 1872 the number was 113·5, which, again, was virtually the same. If they took the stations that came under the Acts subsequently, it would be found that in the first period the admissions were 109·7; in the second period they were 65·4, which was a very marked reduction. The right hon. gentleman had stated that the saving of men's health and time in hospital amounted to one-half man per 1,000; and to make out this he compared the number in hospital at the stations under the Acts in 1872 with the number in 1868, that is, he compared the state of things when the stations were fairly under the Acts with the state of things in the same stations when they were partially under them. The proper thing to have done was to compare the number in hospital at those stations in 1872 with the number that would have been in hospital with the amount of disease that would have existed in them had the Acts not been in force at all. A certain number of the cases of primary sores would be followed by secondary symptoms. The proportion of the time lost for the secondary symptoms must be included; and then it would be found, on making the proper calculations, that instead of losing a half-man per 1,000 per day, there would have been 5·79 in hospital at the stations under the Acts in 1872; but if the prevalence of the disease at them had borne the same ratio to what it was that year at the stations now under the Acts, as it bore in the period from 1861 to 1866, the number in hospital in 1872 would have been 13·41; and the difference between 5·79 and 13·41, or 7·62 per 1,000, was the actual saving of time by the application of the Act. This on 50,800 men, the number under the protection of the Act in 1872, would amount to 387 daily, and could the same protection have been afforded to the 85,000 in the returns would have amounted to 648 daily. The author had also said that there was no indication whether the diminution of primary sores had affected secondary syphilis; but if they took the number of admissions for primary sores from 1860 to 1872 in the whole army at home, it would be found that there were 89·53 per 1,000, the amount of secondary cases being 29·2, or as 3 to 1 very nearly, and if any few years within that period were taken, it would be found that the proportion was in no way materially deviated from. The author had compared the secondary syphilis of 1866 with 1872, which he gave as 23·39 and 24·26 per 1,000 respectively, but in 1866 he had made an error in the calculation, and he gave the number of cases as 1,398; but in reality he had left out 82 cases appearing in the returns as syphilitic iritis and syphilitic cachexia which should be included, and that made the ratio for 1866 24·8 per 1,000, actually greater than that for 1872. Mr. Stansfeld had also overlooked fluctuations. Had he taken instead of 1872 the year 1871, he would have had 20·3 per 1,000, instead of 24·26 for secondary syphilis; so that with secondary as with primary syphilis, a group of years must be taken to get rid of these fluctuations. Taking the period from 1861 to 1866, the secondary syphilis produced an admission rate of 32·4, and from 1867 to 1872 it was 25·6, being a reduction of 6·8 per 1·000. Another point referred to was the invaliding. In 1866 he gave the number invalided as being 43 men, but he left out about 22 cases that were under other names, which would bring the number considerably above what it had been given at. The author subsequently gave the number invalided for secondary syphilis from 1863 to 1866 as 11 per 10,000, actually it was 13·4 in 10,000; from 1867 to 1873 he gave it as 12, actually it was 12·9 per 10,000. He thought he had stated sufficient to lead those who were present to examine much more closely into the statistics than the right honourable gentleman had done, and to draw their own conclusions from them.

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* In this and the subsequent comparisons between these two groups of stations London and Windsor have been included in the group "Never under the Acts,' from 1861 to 1866. Subsequently to 1866 Windsor is included in the other group. The returns for these two stations cannot be separated prior to 1867, but as the strength at Windsor was about one-seventh of that at the two stations only, and as up to the date of its coming under the operation of the Act the prevalence of venereal affection was not less than in London, no material error will arise from this arrangement.

Sir Harcourt Johnstone, M.P., expressed his confidence in the statistics given in Dr. Nevins's pamphlet, and was of opinion from the experience he had obtained from other countries, that the Acts in this country would be utterly inefficacious.

Dr. Mouat stated that as the time allowed for discussion had already been exceeded, he would only make a few very general remarks upon the subject. So far as the debate had gone, he thought that no sufficient answer had been given to Mr. Stansfeld's objections to the statistics, which he had criticised from a strictly scientific standpoint. Narrowing the question to the issues contained in his propositions, which were mere truisms as respects the application of the numerical method to the solution of social problems, Dr. Mouat considered that Mr. Stansfeld had sustained his contention. The complete defence of the accuracy and good faith of his figures by Dr. Balfour, and the additional data supplied by Inspector-General Lawson, together with the facts and figures contained in the parliamentary returns, were not, Dr. Mouat considered, sufficient to determine so large a question. The basis of evidence was too narrow, the numbers involved too small, the disturbing causes of which no note could be taken were too numerous, the time of the experiment too limited, and the absence of any attempt to classify syphilitic sores too unsound to admit of any strictly scientific deduction being made from them for legislative purposes.

Here was a loathsome disease which had lasted for centuries, and had eaten into the very heart of all nations, and which was still corrupting life at its source, while millions were suffering from it. To attempt to deal, on the scale required, with so formidable an evil, from the small body of facts collected in very exceptional circumstances, he regarded as eminently unsound and unscientific. If time permitted, he could show why it was so.

He congratulated Mr. Stansfeld on the strictly philosophic manner in which he had treated the question in that room, and he felt sure that if the opponents and advocates of the Contagious Diseases Acts would always so consider them, some neutral ground would be found on which all right-minded men could agree in dealing with the grave and deplorable evils which it was most desirable to correct. He, for one, did not believe that the remedy would be found in partial or restrictive legislation.

Dr. J. Birkbeck Nevins, while not wishing to throw a doubt upon the good faith of the Government statistics, thought they were put forward in many ways misleading to the public. He dealt in detail with some of the navy reports with the view of showing that the actual figures contradicted most completely in many cases prominent statements that had been put before the public as to the operation of the Acts; and he dwelt upon the serious error in the Table of Stations "never under the Acts," published in the "Army Report" for 1873, which was occasioned by introducing London for the first time in the middle of the table. This had the effect of raising the apparent ratio of disease 15 per 1,000 the first year, and 26 per 1,000 and 23 per 1,000 in the last two years, above what it would have been if the same set of stations had been taken throughout, instead of excluding London from the first half of the table, and including it in the second half, without any comment upon the effect thereby produced on the apparent amount of disease.

Dr. Farr thought the subject was of the utmost importance: this disease affects the health, the life, and the growth of the population. He had his own views as to the operation of the Acts. He held that the wilful communication of a contagious disease was a crime. And when it was found, in the neighbourhood of Aldershot for instance, that there were women who communicated disease to men, or that there were men who gave disease to women, to commit them to hospital and treat them properly while under that disease was a great good and one which they ought to endeavour to accomplish. To remove notorious sources of infection from the field can have but one effect: it must limit the spread of the disease. He did not, however, go so far as some of the supporters of the last Act, in saying that there should be a universal examination of all the women of the kingdom supposed to be prostitutes. He was entirely opposed to that policy. Setting aside the question of policy, the argument of Inspector-General Lawson was, in his belief, perfectly sound. When Inspector-General Lawson, taking stations not under the Act, put six years together before it was in operation and six years together when it was in full operation, and when he showed that in such stations gonorrhœa and primary venereal sores remained substantially the same; and going further when he took the stations under the Act and showed that during the last six years there was a most material reduction—a diminution of nearly one-half the proportion of men attacked by soft venereal sores—that was to him (Dr. Farr) a statement of considerable weight; it was statistically conclusive; and he would sincerely entreat the right honourable gentleman who had done them the honour to attend that evening, and who had come to have the question scientifically discussed, to weigh seriously, with his recognised candour, the weighty arguments of Inspector-General Lawson.

Dr. Guy also approved of the method adopted by Inspector-General Lawson in dealing with the statistics of the subject; first showing that there were fluctuations from year to year, then stating the degree of these fluctuations, and then, by grouping together a number of years, overcoming the obvious objections which arise when we compare one single year with another.

Mr. Stansfeld, in reply, said that Inspector-General Lawson had answered him with statistics of his own and which were not Government statistics. He took issue with the propositions advanced by Dr. Lawson as not being scientific. Dr. Lawson forgot that the irregularity and the want of decrease in the primary venereal sores in stations not under the Act since 1866, was attributable to the fact that London was included since 1866 and not before. He accepted Dr. Lawson's theory of averages, but his objection was that Dr. Lawson took a period before the Acts and a period after the Acts, and in comparing them took credit for a reduction which was effected before the Acts were in existence. Every medical man knew that there was a reduction in the number and severity of cases long before the introduction of the Acts, and that this diminution would have continued in some proportion. He denied that he had the slightest wish to impugn the accuracy or good faith of the army returns, as some of the speakers seemed to think he had done. What he did wish to seriously impugn was the construction of the statistics as being unscientific in their construction from a statistical point of view. In conclusion, he thanked the Society for the opportunity afforded him for reading the paper and for the attention which had been paid to his remarks.

MISCELLANEA.

CONTENTS:

	PAGE
I.—Consul-General Playfair's Reports upon Algeria	573
II.—Lloyd's Statistics of Marine Losses for the Year 1875	577
III.—Underwriting in the Year 1805	592

I.—*Consul-General Playfair's Reports upon Algeria.*

The series of reports by Lieutenant-Colonel Playfair, Her Britannic Majesty's Consular representative, furnish as complete a description as can probably be obtained from any source, of the past condition and the present resources, capabilities, &c., of the French possessions in Algeria. The world, he believes, owes a debt of gratitude to France for having converted a country—which, on the seacoast, was a nest of pirates, the terror of the Mediterranean, and in the interior a chaos of anarchy and civil war—into a colony, not yet, indeed, as prosperous as its rich soil and unequalled climate ought to make it, but requiring only tranquillity and population to make it again what it once was—the granary of Southern Europe.

The conquest by the French took place in 1830: it was not, however, till 1847 that Abd-el-Kader submitted, while the oasis of the South and the Grand Kabylia were not finally subjugated until 1857. At the conquest the regency was considered in a flourishing condition, and nearly 2,000,000*l.* were found in the Turkish treasury, a sum more than sufficient to pay the expenses of the war; nevertheless, the united values of the exports and imports at that date did not exceed 175,000*l.* per annum. Algiers, Blidah, Oran, Cherchell, and Bône were the only really flourishing towns of the regency; all the rest of the Tell, with the exception of Kabylia, was occupied by the petty clients of a limited number of rich families, who thought much more of defending their crops against the attacks of their neighbours than of advancing the public prosperity. Each tribe lived apart on its own resources, ever on the alert to repel assailants. There was no such thing as a commonwealth, no means of communication, and hardly any commercial transactions. The French have, nevertheless, got into a habit of depreciating what they have done in Algeria. According to the census of 1866, there were in civil territory and in the colonised parts of military territory, 19 cities, 329 villages, 50,783 houses, 107,894 homesteads, and a population of nearly 3,000,000. The indigenous part of this population comprises two distinct races—the one of European, the other of Arabian origin. The first, settled in the mountains of Kabylia, has preserved the tradition of Roman law and municipal institutions. It inhabits villages; land therein is the property of individual owners; and one frequently meets among them types easily recognisable of the Latin and Germanic races. The second is much less advanced; has the habits, ideas, and the nomadic life of the most primitive times; and it may be said to have just emerged from barbarism, without having attained civilisation.

The principal elements of exchange with Europe consist of cereals, linseed, vegetables, vegetable fibres, wool, cattle, hides, oil, tobacco, canes, minerals, and a small quantity of silk, cotton and madder. Algeria is essentially a pastoral and agricultural colony; and though it may look forward to become an entrepôt for the products of European industry, it can never hope to rival those, or become itself industrial. In the Tell, the portion most favourable for cultivation, there are not less than 30,000,000 of acres, of which hardly more than 10,000,000 or 12,000,000 are planted with cereals. The total production of the colony in 1874 was 16,000,000 quintals of grain; of this about 2,000,000 quintals, worth 40,000,000 frs., were exported. The crops of 1863 were about the best on record: 25,000,000 hectolitres of grain were produced; the years of 1865 and 1866 were most disastrous, owing to the want of rain in both years, and to the invasion of locusts in the latter. The first plague of locusts during the French occupation took place in 1845; but the second left deeper traces for several years, both from the immense quantity of insects which remained, and from the permanent injury they had occasioned to vegetable life—which has been estimated at 800,000*l.* sterling. The principal cereals cultivated are soft and hard wheat, rye, barley, oats, Indian corn, beans, and sago (millet). The quantity of land sown and the crops gathered between 1867 and 1872 were as follows:—

	Surface Sown.	Quantity of Corn Gathered.
	Hectares.	Quintals.
1867	1,307,072	4,851,491
'68	1,447,773	11,632,017
'69	1,684,133	10,676,492
'70	1,727,315	12,575,905
'71	1,914,571	6,912,773
'72	1,814,955	12,290,162

It is interesting to compare the gradual improvement in the means used for the cultivation of the soil, with the steady decrease in the rude instruments which hitherto the Arabs have exclusively employed. During the six years between 1867 and 1872 the number of European agricultural implements increased from 43,299 to 49,187, and their value from 5,113,413 frs. to 7,950,677 frs.; while native ones have decreased from 215,855 to 185,572, and their value from 1,833,186 frs. to 1,515,629 frs. This is to a great extent the consequence of improved cultivation, but in some degree likewise due to the steady decrease in the native races.

The wheat of Algeria, and especially the hard wheat,—which is so valuable for the manufacture of maccaroni, vermicelli, and other *pates*—is much esteemed in European markets; the gluten, which constitutes the essential element for the transformation of this wheat into maccaroni, exists in greater quantities than in that of other countries, even in that of Taganrog and Sicily. The variety of barley cultivated by the natives, and which the Europeans have generally adopted as the most productive, is the *Nordeum noxasticum;* but other species have been sown with success. It is principally used as food for mules and horses, but the poorer classes eat it too; it is also grown as forage, either to be cut green, or made into hay. Algerian barley is considered well adapted for the manufacture of malt liquors. The vine cultivation is becoming yearly more considerable. The amount of land under cultivation and the quantity of wine made in 1866-72 were as follows :—

		1866.	1872.
Superficies planted...........	hectares	8,187	10,069
Wine made..........................	hectolitres	99,101	227,840

The above was the result of European cultivation; the natives had increased their culture from 3,243 hectares in 1866 to 6,619 hectares in 1872. The manufacture of essences ought to become an important branch of industry in Algeria. Already a large extent of land is under cultivation with geranium and the various kinds of oranges, jasmine, tuberose, thymes, and ought to be of easy cultivation. One house at Boufarik manufactures 10,000 kilos. of various essences per annum. The cultivation of tobacco is increasing sensibly; in 1867 the superficies cultivated by Europeans and natives was 4,343 hectares, and the quantity of leaves gathered 2,591,204 kilos.; and in 1874 the superficies cultivated was 6,460 hectares, and the quantity gathered 4,700,000 kilos.; the exportation of tobacco increased in the same period from 1,500,000 to 4,000,000 kilos. From the 1st January to the 1st June, 1875, the Government depôt in Algiers purchased 3,287,067 kilos. for 2,510,347 frs., the net benefit to the State being 25,000,000 frs.! Under such circumstances it is easy to understand that the administration has no interest in encouraging the growers of tobacco to send their produce abroad; and at the same time, as the prices paid are very arbitrary, and nearly as much can be obtained for the worst as for the best quality, the growers are equally without interest in attempting to improve it. It seems most probable that if intelligent colonists in Algeria could be put in direct communication with importers in other countries, a very large quantity of the finest leaf might be produced in Algeria. One of the great sources of wealth to the colony is its sheep, which are bred on the high plateau, where agriculture is an absolute impossibility. Before the conquest, the Arabs reaped hardly any advantage from their flocks, save their own subsistence, as they were to a great extent cut off from the market on the sea coast by the rapacity of the intervening tribes. During the first five months of 1872, the number of cattle and sheep imported into Marseilles from all quarters were:—

Cattle	5,041
Sheep	96,821

of which the arrivals from Algeria were:

Cattle	1,060
Sheep	86,882

and in 1874 there were 341,035 head of sheep exported, valued at 6,821,100 frs. The total amount of cattle—including horses, mules, asses, camels, oxen, sheep, goats, and pigs—in 1872 belonging to Europeans amounted to 392,975, and to natives to 9,774,852. This was an increase during the previous six years of 46,809 in the animals belonging to Europeans, and a decrease of 3,688,979 in those owned by the natives.

The most important of the vegetable productions of Algeria is beyond doubt the alfa fibre, which grows spontaneously over vast tracts of country where cultivation of any description is impossible. 4,000,000 hectares, or 10,000,000 acres, are covered with this plant, from which a quantity of paper-making material may annually be collected, equal to three-fourths of all the rags used and sold throughout the world. There appears to be no limit to the number and variety of manufactures in which paper, if tolerably cheap, may be made to replace more costly materials. It is already used by opticians for telescopes, shoemakers, hatters, house decorators; excellent casks have been made of it, and only its present cost prevents its extensive use in ship-building. The exportation of alfa, which in 1869 amounted to 4,000 tons, and in 1870 to 32,000 tons, amounted in 1873 to 45,759 tons, in 1874 it reached 58,000, and in 1875 it was expected to exceed 60,000. The railways in construction and projected will enable this substance to be brought to the coast in greater quantities and at a much less rate than at present. The exportation of *crin vegetal,* or vegetable horsehair, continues to increase. It is simply the leaves of the dwarf palm, *Chamacrops humilis,* which covers so large a part of the uncleared land of Algeria. The fibrous portion is separated by a very simple process and corded; sometimes it is dyed with a mixture of logwood and sulphate of iron, to give it still further the appearance of horsehair for stuffing furniture. It is also used in common with alfa for making rope, cords, baskets, &c., and it has been employed, though not hitherto with great success, in the manufacture of paper.

The forests, which cover about 8,500,000 hectares, are one of the principal sources of wealth and prosperity to the colony. Hitherto periodical conflagrations have been so frequent and so serious as to threaten their almost entire destruction. A law was passed on the 17th July, 1874, for their more careful preservation, and for applying to the tribes amongst whom a fire shall break out the principle of collective responsibility. These forests produce several species of oak, especially cork; the Aleppo pine, from which resin is extracted; the cedar of altas, a most valuable timber for building and cabinet-making; the thuya, celebrated even in the times of the Romans as an ornamental wood; ash, elm, lentisque, and wild olive. Many acres have hitherto been conceded to private individuals or given up for the use of the native population; but it is happily determined that in future no forest land is to be alienated from the State.

During the last thirty years numerous concessions of iron, lead, copper, and other minerals have been made, but the working of them has not always been attended with success. Many commissionaires have been obliged to suspend their operations, or to abandon works which the cost of labour and the difficulty of transport rendered unproductive. The creation of roads, and especially railways, has modified these conditions. The number of workmen employed in mining operations in 1874 was 3,500, and the annual amount of their wages 4,000,000 frs. The total exportation of iron ore in 1873 was 420,662 tons, and during the first three-quarters of 1874 it reached 368,000 tons. To aid as far as possible those who are seeking to develop the mineral wealth of Algeria, all the information in the possession of the Government has been published in a valuable work by the head service of mines, which those interested in the subject would do well to consult.

The ports of Algiers, Oran, and Bône, and to a less extent those of Arzew, Dellys, Bougie, and Collo, may now be said to be in a condition as satisfactory as the commerce of the country demands. The total value of the imports and exports in 1874, classified under the various categories, was as follows:—

	Imports.	Exports.
	frs.	frs.
Animal substances	10,460,604	34,872,090
Vegetable ,,	31,486,469	78,455,248
Mineral ,,	5,563,704	10,139,498
Manufactured goods	138,348,699	26,102,186
Specie	10,395,788	283,873
Total	196,255,214	149,952,895

The various countries to which Algeria has sent its produce are:—France, 69·21 per cent.; Great Britain, 13·10; Spain, 8·36; Italy, 5·41; and other countries in lesser proportions. The vessels that entered the harbours during 1874 were 4,043 in number, with an aggregate of 999,265 tons; the number of their crews was 2,494 men. The proportion attributed to each flag was:—France, 66·87 per cent.; Great Britain, 15·54; Spain, 6·75; Italy, 5·62; Austria, 1·78; and others in lesser proportions. Consul-General Playfair remarks upon the exaggerated idea that exists of the cost of Algeria to France; the total amount expended in it up to the end of 1873 was 2,500,000,000 frs., of which sum 2,443,683,288 frs. was for the army. The exportations and importations alone up to that time since the conquest had amounted to 6,243,779,271 frs., and considering that a colony has been created almost out of chaos, with ports, fortifications, public buildings of all kinds, roads, railways, villages, cities, abundance of cleared and fertile land, irrigational works, mines of immense value, the expenditure of 2½ milliards appears to be money well invested, even from the most commercial point of view. Who shall estimate the gain to humanity by the transformation of a nest of pirates and robbers into the beautiful colony which Algeria now is?

II.—*Lloyd's Statistics of Marine Losses for the Year* 1875.

In the *Journals of the Statistical Society*, vol. xxxvii, part 4, December, 1874; vol. xxxviii, part 1, March, 1875; and vol. xxxix, part 1, March, 1876, appeared the tables of the *wrecks, casualties, and collisions reported to the corporation of Lloyd's*, during the years 1872, 1873, and 1874 respectively.

By the energy of the statistical department of Lloyd's and the courtesy of the committee and its admirable secretary, we are able to publish those reported during the year 1875 considerably earlier than heretofore, and *we hope* in future years to give them not later than in the June *Journal.*

Sailing vessels show a slight decrease in the number of casualties in 1875 as compared with the average of the previous nine years, the numbers being 10,766 in 1875, while the average was 10,835, or a reduction of ·64 per cent.; but, as according to the *Répertoire Général* of the Bureau Veritas, mercantile sea-going *sailing vessels* of the world had decreased between 1870 and 1875 by 3·80 per cent. in number, and by 5·88 per cent. in tonnage, the casualties of 1875 show a relative increase.

Casualties to *steamers* had very seriously increased, the nine years' average being 1,678, while the number in 1875 was no less than 2,545, or an increase of 51·67 per cent. Against this increase, however, it must be borne in mind that the mercantile sea-going *steamers* of the world, as given in the volume above referred to, had increased from the year 1870 to 1875, by 33·57 per cent. in number, and by 92·04 per cent. in tonnage.

It is satisfactory to notice that the casualties to *sailing vessels* seem not to have been quite so serious as in the previous nine years, for example, *missing sailing vessels* were only 71 in 1875, as compared with an average of 95. *Sailing vessels abandoned* numbered only 300, against an average of 332. *Sailing vessels in collision,* however, were 2,012 in 1875, as compared with an average of 1,816, or an increase of 10·79 per cent. *Sailing vessels burnt or on fire* were only 124, while the average was 151.

When we turn to *steamers* the state of things is, unfortunately, very different. Not only has the number of casualties greatly increased, but, it would seem, their gravity also.

There were 11 *missing steamers* in 1875, against an average of 8, or an increase of 37·50 per cent. *Collisions* occurred to 798 as compared with the average of 518, or an increase of 54·55 per cent. Of these 374 were *damaged or sunk,* while the average was only 243, showing an increase of 53·91 per cent.

Sinking from causes other than collision had diminished from an average of 45 to 36 in 1875. *Strandings* to *steamers* had increased from an average of 431, to 674 in 1875, or by 56·38 per cent., while of these the average number *not got off* was 73, but in 1875 it amounted to 113, or an increase of 54·79 per cent.

Burnings to *steamers* gave an average of 44, but in 1875 they numbered 58, an increase of 31·82 per cent.

Steamers with *machinery damaged or short of coals* in 1875 numbered 475, while the average was 332, an increase of 43·07 per cent., while *steamers* reported *with damage to the ship* amounted to 308, the average being only 156, an increase of 97·44 per cent.

Crews saved, so far as reported, numbered in *sailing vessels* 967 in 1875, the average being 936, a small increase of 3·31 per cent.; while in *steamers* the number was 92, compared with an average of 58, or an increase of 58·62 per cent.; but, unhappily, *crews reported drowned* also showed a considerable increase, namely, in *sailing vessels* 122, while the average was 87, an increase of 40·23 per cent.; and in *steamers* 11, with an average of 6, or 83·33 per cent. increase.

It may, however, be fairly hoped that some portion of this increase is due to greater care and correctness in reporting casualties.

Lives lost reported in 1875 numbered 1,829, while the average for the nine previous years gave only 1,693, an increase of 8·03 per cent.

From these tables it would appear that while the casualties of 1875 have been somewhat more serious than usual, the *results* from them—so far as they are reported and known—have been less disastrous than might be expected, for *total and constructive losses* to *sailing vessels* were only 1,726, while the average was 2,184, or a reduction of 20·97 per cent.; and *steamers* gave as *total and constructive losses* only 179 in 1875, against an average of 155, an increase of only 15·48 per cent.

In the first and second quarters of 1875, the casualties to *sailing vessels* were considerably less than usual, and slightly so in the third quarter, but in the fourth much in excess of the average, no less than by 23·00 per cent. *Steamers* were in excess in each quarter of the year as under:—First quarter, 54·44 per cent.;

second quarter, 52·60 per cent.; third quarter, 54·55 per cent.; fourth quarter, 46·79 per cent.

From the *Répertoire Général* it would appear that the mercantile sea-going *sailing vessels of the world* in 1875 amounted to 57,258 vessels, with a tonnage of 15,099,001 tons, or an average of 281 tons per vessel; while mercantile *steamers* numbered 5,519 vessels, with a gross tonnage of 5,364,492 tons, or an average of 972 tons per vessel. Assuming these figures as approximately correct, it would appear that 18·81 per cent. of *sailing vessels* had casualties reported to Lloyd's during that year; while the proportion for *steamers* would appear to be 46·12 per cent.

Upon the same approximate basis of comparison the proportions for the four years 1872-75 appear as follow:—

Proportion of Casualties Reported to Lloyd's to Existing Sea-going Mercantile Vessels.

	1872.	1873.	1874.	1875.
Sailing vessels .... percentage	20·51	19·77	19·73	18·81
Steamers .... „	55·32	47·55	46·97	46·12

The results thus shown indicate a comparatively moderate amount of loss and damage to the mercantile navy during the year 1875, which, if we are correctly informed, is confirmed by the generally satisfactory character of underwriting business transacted during the same period.

1.—*A Table showing the Number of Wrecks and Casualties to Sailing Vessels and Steamers Compared with the Average Number and*

Sailing Vessels.	First Half-Year.				Second Half-Year.				Annual Total.			
	1875.		Average Nine previous Years.		1875.		Average Nine previous Years.		1875.		Average Nine previous Years.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1. *Missing*	47	1·15	62	1·24	24	0·36	33	0·56	71	0·66	95	0·86
2. *Abandoned*—												
Recovered	27	0·66	33	0·67	42	0·63	38	0·66	69	0·64	72	0·67
Lost	94	2·30	127	2·53	137	2·05	133	2·29	231	2·15	260	2·40
Total	121	2·97	160	3·20	179	2·68	172	2·95	300	2·79	332	3·07
3. *Collision*—												
Not damaged	148	3·63	216	4·32	488	7·30	264	4·52	636	5·91	480	4·43
Damaged........	505	12·38	551	11·01	720	10·77	630	10·80	1,225	11·38	1,181	10·90
Sunk	65	1·59	74	1·49	86	1·28	80	1·38	151	1·40	155	1·33
Total	718	17·60	842	16·82	1,294	19·35	974	16·70	2,012	18·69	1,816	16·76
4. Sinking from causes other than collision	90	2·21	164	3·28	166	2·48	183	3·15	256	2·38	347	3·21
5. *Stranded*—												
Got off	669	16·40	700	13·99	858	12·83	752	12·90	1,527	14·18	1,452	13·40
Not got off	398	9·77	511	10·22	573	8·57	681	11·68	971	9·02	1,192	11·01
Subsequent fate not reported	59	1·44	135	2·70	122	1·82	181	3·11	181	1·68	316	2·92
Total	1,126	27·61	1,347	26·91	1,553	23·22	1,614	27·68	2,679	24·88	2,961	27·33
6. Capture	1	0·02	5	0·10	—	—	11	0·18	1	0·01	15	0·14
7. Piracy...............	1	0·02	2	0·04	1	0·02	2	0·04	2	0·02	4	0·04
8. Burnt or on fire	61	1·50	69	1·38	63	0·94	82	1·41	124	1·15	151	1·40
9. Dismasted or disabled........	177	4·34	186	3·73	228	3·41	292	5·00	405	3·76	478	4·41
10. Jettison of cargo under deck	116	2·84	91	1·83	102	1·53	89	1·52	218	2·02	181	1·67
11. Jettison of deck-load or washed overboard	24	0·59	59	1·18	180	2·69	110	1·91	204	1·89	171	1·57
12. Leaky...............	422	10·34	532	10·63	756	11·31	660	11·34	1,178	10·94	1,192	11·01
13. Loss of anchor or chains	130	3·19	240	4·80	382	5·71	268	4·59	512	4·76	510	4·69
14. Machinery damaged, &c.	—	—	—	—	—	—	—	—	—	—	—	—
15. Mutiny, sickness, casualties to crew or refusing duty	95	2·33	127	2·54	130	1·94	120	2·06	225	2·09	247	2·28
16. Ship dmged., &c.	945	23·17	1,106	22·10	1,605	24·00	1,200	20·58	2,550	23·69	2,306	21·28
17. Water-logged....	5	0·12	11	0·22	24	0·36	18	0·31	29	0·27	29	0·27
Number of casualts.	4,079	—	5,005	—	6,687	—	5.830	—	10,766	—	10,835	—
Number of vessels	3,823	—	4,643	--	6,256	—	5,447	—	10,079	—	10,090	—

reported in "Lloyd's List," during the Year 1875, *and the respective Percentages thereon, Percentages for the Nine Previous Years.*

First Half-Year.				Second Half-Year.				Annual Total.				Steamers.
1875.		Average Nine previous Years.		1875.		Average Nine previous Years.		1875.		Average Nine previous Years.		
Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	
7	0·59	6	0·81	4	0·29	2	0·27	11	0·43	8	0·52	1. *Missing*
												2. *Abandoned*—
1	0·09	1	0·10	—	—	—	—	1	0·04	1	0·08	Recovered
—	—	2	0·28	1	0·07	2	0·19	1	0·04	4	0·22	Lost
1	0·09	3	0·38	1	0·07	2	0·24	2	0·08	5	0·30	Total
												3. *Collision*—
144	12·21	118	15·48	280	20·50	157	17·23	424	16·66	276	16·43	Not damaged
146	12·38	96	12·50	200	14·64	123	13·47	346	13·60	219	13·03	Damaged
14	1·19	10	1·26	14	1·02	14	1·59	28	1·10	24	1·44	Sunk
304	25·78	224	29·24	494	36·16	294	32·29	798	31·35	518	30·90	Total
14	1·19	20	2·64	22	1·61	25	2·70	36	1·42	45	2·68	4. Sinking from causes other than collision
												5. *Stranded*—
288	24·43	152	19·80	261	19·11	183	20·11	549	21·57	335	19·96	Got off
54	4·58	31	4·02	59	4·32	42	4·64	113	4·44	73	4·36	Not got off
4	0·34	13	1·69	8	0·58	10	1·05	12	0·47	23	1·35	Subsequent fate not reported
346	29·35	195	25·51	328	24·01	235	25·80	674	26·48	431	25·67	Total
—	—	—	—	—	—	1	0·12	—	—	2	0·10	6. Capture
—	—	—	—	—	—	—	—	—	—	—	—	7. Piracy
27	2·29	20	2·76	31	2·27	22	2·47	58	2·28	44	2·60	8. Burnt or on fire
9	0·76	7	0·90	8	0·58	11	1·26	17	0·67	18	1·09	9. Dismasted or disabled
25	2·12	10	1·45	18	1·32	11	1·18	43	1·69	22	1·30	10. Jettison of cargo under deck
5	0·42	6	0·77	16	1·17	9	1·04	21	0·83	15	0·91	11. Jettison of deckload or washed overboard
36	3·05	21	2·77	30	2·20	22	2·42	66	2·59	43	2·58	12. Leaky
9	0·76	9	1·22	10	0·73	8	0·88	19	0·74	17	1·03	13. Loss of anchors or chains
228	19·34	158	20·59	247	18·08	174	19·14	475	18·66	332	19·80	14. Machinery damaged or short of coals
7	0·59	10	1·35	10	0·73	10	1·09	17	0·67	20	1·21	15. Mutiny, sickness, casualties to crew, or refusing duty
161	13·66	73	9·53	147	10·76	84	9·08	308	12·10	156	9·28	16. Ship dmgd., &c.
—	—	—	—	—	—	—	—	—	—	—	—	17. Water-logged
1,179	—	766	—	1,366	—	912	—	2,545	—	1,678	—	Number of casualties
1,142	—	737	—	1,337	—	883	—	2,479	—	1,620	—	Number of steamers

2.—*A Table showing the Results of Wrecks and Casualties to Ship and Cargo, with Salvage during the Year* 1875, *and the respective Percentages thereon, compared*

Sailing Vessels.	First Half-Year.				Second Half-Year.				Annual Total.			
	1875.		Average Nine previous Years.		1875.		Average Nine previous Years.		1875.		Average Nine previous Years.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Results to Ship—												
Total loss	654	17·11	904	19·47	958	15·31	1,096	20·11	1,612	15·99	2,001	19·83
Constructive loss	55	1·44	96	2·06	59	0·94	87	1·60	114	1·13	183	1·88
Great damage	403	10·54	485	10·44	535	8·55	649	11·93	938	9·31	1,134	11·24
Minor damage	1,990	52·05	2,170	46·73	3,218	51·44	2,446	44·92	5,208	51·67	4,616	45·75
Raised after sinking	21	0·55	19	0·41	34	0·54	14	0·27	55	0·55	33	0·33
Not damaged or results unknown	700	18·31	970	20·89	1,452	23·21	1,152	21·16	2,152	21·35	2,122	21·04
Total	3,823	—	4,643	—	6,256	—	5,447	—	10,079	—	10,090	—
Results to Cargo so far as reported—												
All lost	332	8·68	528	11·38	426	6·81	553	10·16	758	7·52	1,081	10·72
Part lost	204	5·33	256	5·51	334	5·34	295	5·42	538	5·34	550	5·45
All saved	10	0·26	21	0·45	4	0·06	15	0·28	14	0·14	36	0·36
Forwarded	4	0·10	14	0·31	3	0·05	9	0·16	7	0·07	23	0·23
Heated	6	0·16	11	0·23	5	0·08	9	0·16	11	0·11	19	0·19
Shifted	40	1·05	68	1·46	67	1·07	69	1·27	107	1·06	137	1·36
Otherwise damaged	61	1·60	70	0·51	78	1·25	67	1·23	139	1·38	137	1·25
Salvage Services	300	7·85	459	9·90	406	6·49	492	9·03	706	7·00	951	9·42
Lives—												
Crews saved	418	10·93	428	9·23	549	8·78	508	9·32	967	9·59	936	9·28
Crews drowned	60	1·57	45	0·98	62	0·99	41	0·77	122	1·21	87	0·86
Lives lost so far as reported (in both ships and steamers)	820	—	879	—	1,009	—	814	—	1,829	—	1,693	—

Services, Crews Saved or Drowned and Lives Lost, so far as reported in "Lloyd's List," with the Average Number and Percentages for the Nine Previous Years.

First Half-Year.				Second Half-Year.				Annual Total.				Steamers.
1875.		Average Nine previous Years.		1875.		Average Nine previous Years.		1875.		Average Nine previous Years.		
Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	
												Results to Ship—
78	6·83	64	8·75	95	7·11	81	9·20	173	6·98	146	8·99	Total loss
3	0·26	5	0·72	3	0·22	4	0·45	6	0·24	9	0·58	Constructive loss
57	4·99	57	7·69	62	4·64	74	8·43	119	4·80	131	8·09	Great damage
584	51·14	310	42·15	611	45·70	352	39·88	1,195	48·21	663	40·92	Minor damage
8	0·70	6	0·79	8	0·60	7	0·84	16	0·64	13	0·82	Raised after sinking
412	36·08	294	39·90	558	41·73	364	41·19	970	39·13	658	40·60	Not damaged or results unknown
1,142	—	737	—	1,337	—	883	—	2,479	—	1,620	—	Total
												Results to Cargo so far as reported—
29	2·54	27	3·62	33	2·47	30	3·41	62	2·50	57	3·50	All lost
51	4·47	30	4·07	55	4·11	36	4·05	106	4·28	65	4·06	Part lost
3	0·26	1	0·18	3	0·22	1	0·11	6	0·24	2	0·14	All saved
1	0·09	1	0·15	—	—	1	0·09	1	0·04	2	0·12	Forwarded
2	0·18	1	0·09	—	—	1	0·09	2	0·08	1	0·08	Heated
16	1·40	8	1·15	25	1·87	12	1·36	41	1·65	20	1·26	Shifted
32	2·80	15	2·01	33	2·47	20	2·23	65	2·62	34	2·13	Otherwise damaged
79	6·92	59	8·01	66	4·94	64	7·21	145	5·85	123	7·43	*Salvage Services*
												Lives—
45	3·94	29	3·89	47	3·52	29	3·27	92	3·71	58	3·55	Crews saved
5	0·44	4	0·56	6	0·45	1	0·18	11	0·24	6	0·35	Crews drowned
				See	Sail	ing	Vessels					Lives lost so far as reported (in both ships and steamers)

3.—*A Table showing the Number of Wrecks and Casualties to Sailing Vessels reported*
Compared with the Average Number and Percentages

Sailing Vessels.	First Quarter.				Second Quarter.			
	1875.		Average Nine previous Years.		1875.		Average Nine previous Years.	
	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.
1. *Missing*	25	1·00	27	0·84	22	1·39	33	1·95
2. *Abandoned*—								
Recovered	17	0·68	22	0·67	10	0·63	12	2·78
Lost	58	2·33	77	2·39	36	2·27	49	0·67
Total	75	3·01	99	3·06	46	2·90	61	3·45
3. *Collision*—								
Not damaged	84	3·37	131	4·08	64	4·04	85	4·77
Damaged	286	11·47	354	10·97	219	13·81	197	11·08
Sunk	41	1·65	44	1·37	24	1·51	30	1·70
Total	411	16·49	529	16·41	307	19·36	313	17·56
4. Sinking from causes other than collision	44	1·76	91	2·84	46	2·90	73	4·10
5. *Stranded*—								
Got off	357	14·32	418	12·96	312	19·67	282	15·86
Not got off	261	10·47	330	10·22	137	8·64	182	10·21
Subsequent fate not reported	35	1·40	91	2·82	24	1·51	44	2·48
Total	653	26·19	839	26·00	473	29·82	508	28·55
6. Capture	1	0·04	2	0·07	—	—	2	0·14
7. Piracy	1	0·04	1	0·03	—	—	1	0·04
8. Burnt or on fire	42	1·68	36	1·11	19	1·20	33	1·86
9. Dismasted or disabled	96	3·85	113	3·50	81	5·11	74	4·14
10. Jettison of cargo under deck	73	2·93	62	1·92	43	2·71	30	1·67
11. Jettison of deckload or washed overboard	16	0·64	38	1·17	8	0·50	21	1·20
12. Leaky	252	10·11	341	10·58	170	10·72	191	10·74
13. Loss of anchors or chains	85	3·41	197	6·12	45	2·84	43	2·42
14. Mutiny, sickness, casualty to crew or refusing duty	62	2·49	77	2·40	33	2·08	50	2·80
15. Ship damaged, loss of bulwarks, sails, &c.	655	26·27	766	23·74	290	18·28	340	19·08
16. Water-logged	2	0·08	6	0·18	3	0·19	5	0·29
Number of casualties	2,493	—	3,225	—	1,586	—	1,780	—
Number of vessels	2,321	—	2,961	—	1,502	—	1,682	—

in "Lloyd's List," during the Four Quarters of 1875, *and the respective Percentages thereon for the same period of the Nine Previous Years.*

Third Quarter.				Fourth Quarter.				Sailing Vessels.
1875.		Average Nine previous Years.		1875.		Average Nine previous Years.		
Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	
12	0·62	17	0·89	12	0·25	15	0·40	1. *Missing*
								2. *Abandoned*—
6	0·31	13	0·64	36	0·76	26	0·68	Recovered
23	1·20	37	1·92	114	2·39	96	2·47	Lost
29	1·51	50	2·56	150	3·15	122	3·15	Total
								3. *Collision*—
190	9·91	97	4·98	298	6·25	165	4·28	Not damaged
278	14·49	232	11·88	442	9·27	398	10·26	Damaged
29	1·51	31	1·58	57	1·19	50	1·28	Sunk
497	25·91	360	18·44	797	16·71	613	15·82	Total
66	3·44	72	3·70	100	2·10	111	2·86	4. Sinking from causes other than collision
								5. *Stranded*—
349	18·20	271	13·91	509	10·67	480	12·39	Got off
136	7·09	207	10·61	437	9·16	474	12·22	Not got off
15	0·78	52	2·66	107	2·24	129	3·33	Subsequent fate not reported
500	26·07	531	27·18	1,053	22·08	1,083	27·94	Total
—	—	4	0·22	—	—	6	0·17	6. Capture
1	0·05	1	0·09	—	—	1	0·02	7. Piracy
26	1·35	37	1·88	37	0·78	46	1·18	8. Burnt or on fire
79	4·12	104	5·33	149	3·10	188	4·84	9. Dismasted or disabled
32	1·67	30	1·52	70	1·47	60	1·54	10. Jettison of cargo under deck
22	1·15	20	1·03	158	3·31	91	2·36	11. Jettison of deckload or washed overboard
233	12·15	258	13·20	523	10·97	403	10·38	12. Leaky
24	1·25	50	2·56	358	7·51	217	5·61	13. Loss of anchors or chains
41	2·14	51	2·60	89	1·87	69	1·79	14. Mutiny, sickness, casualty to crew or refusing duty
352	18·35	361	18·51	1,253	26·27	838	21·62	15. Ship damaged, loss of bulwarks, sails, &c.
4	0·21	6	0·29	20	0·42	12	0·32	16. Water-logged
1,918	—	1,953	—	4,769	—	3,877	—	Number of casualties
1,841	—	1,852	—	4,415	—	3,595	—	Number of vessels

4.—*A Table showing the Number of Wrecks and Casualties to Steamers reported in*
Compared with the Average Number and Percentages

Steamers.	First Quarter.				Second Quarter.			
	1875.		Average Nine previous Years.		1875.		Average Nine previous Years.	
	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.
1. *Missing*	6	0·89	4	0·96	1	0·20	2	0·61
2. *Abandoned*—								
Recovered	1	0·15	—	—	—	—	—	—
Lost	—	—	1	0·33	—	—	1	0·20
Total	1	0·15	2	0·41	—	—	1	0·34
3. *Collision*—								
Not damaged	87	12·83	65	14·74	57	11·37	54	16·46
Damaged	91	13·42	54	12·43	55	10·98	41	12·59
Sunk	9	1·33	6	1·29	5	1·00	4	1·22
Total	187	27·58	125	28·46	117	23·35	99	30·27
4. Sinking from causes other than collision	8	1·18	11	2·63	6	1·20	8	2·65
5. *Stranded*—								
Got off	166	24·48	78	17·90	122	24·35	73	22·33
Not got off	30	4·42	17	3·82	24	4·79	14	4·28
Subsequent fate not reported	2	0·30	8	1·93	2	0·40	4	1·39
Total	198	29·20	104	23·65	148	29·54	92	28·00
6. Capture	—	—	—	—	—	—	—	—
7. Piracy	—	—	—	—	—	—	—	—
8. Burnt or on fire	11	1·62	10	2·28	16	3·19	11	3·39
9. Dismasted or disabled	4	0·59	4	1·04	5	1·00	2	0·71
10. Jettison of cargo under deck	9	1·33	6	1·37	16	3·19	5	1·56
11. Jettison of deckload or washed overboard	3	0·44	5	1·06	2	0·40	1	0·37
12. Leaky	17	2·51	12	2·68	19	3·79	9	2·89
13. Loss of anchors or chains	6	0·89	7	1·62	3	0·60	2	0·68
14. Machinery damaged or short of coals	115	16·96	88	20·13	113	22·55	69	21·22
15. Mutiny, sickness, casualty to crew, or refusing duty	4	0·59	6	1·37	3	0·60	4	1·32
16. Ship damaged, loss of sails, bulwarks, &c.	109	16·07	54	12·31	52	10·38	19	5·81
17. Water-logged	—	—	—	—	—	—	—	—
Number of casualties	678	—	439	—	501	—	327	—
Number of steamers	661	—	423	—	481	—	314	—

"Lloyd's List," during the Four Quarters of 1875, *and the respective Percentages thereon, for the same period of the Nine Previous Years.*

Third Quarter.				Fourth Quarter.				Steamers.
1875.		Average Nine Previous Years.		1875.		Average Nine Previous Years.		
Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	
—	—	—	—	4	0·49	2	0·33	1. *Missing*
								2. *Abandoned*—
—	—	—	—	—	—	—	—	Recovered
—	—	—	—	1	0·12	1	0·20	Lost
—	—	—	—	1	0·12	1	0·28	Total
								3. *Collision*—
121	22·24	66	11·85	159	19·34	91	16·20	Not damaged
100	18·38	50	14·30	100	12·17	72	12·95	Damaged
6	1·10	6	1·86	8	0·97	8	1·43	Sunk
227	41·72	123	35·01	267	32·48	171	30·58	Total
7	1·29	9	2·56	15	1·82	16	2·80	4. Sinking from causes other than collision
								5. *Stranded*—
103	18·93	73	20·84	158	19·22	110	19·66	Got off
18	3·31	16	4·67	41	4·99	26	4·62	Not got off
—	—	3	0·79	8	0·97	7	1·23	Subsequent fate not reported
121	22·24	92	26·30	207	25·18	143	25·51	Total
—	—	—	—	—	—	1	0·18	6. Capture
—	—	—	—	—	—	—	—	7. Piracy
16	2·94	11	3·03	15	1·82	11	2·12	8. Burnt or on fire
3	0·55	3	0·79	5	0·61	8	1·55	9. Dismasted or disabled
11	2·02	5	1·45	7	0·85	6	1·01	10. Jettison of cargo under deck
2	0·37	1	0·38	14	1·70	8	1·45	11. Jettison of deckload or washed overboard
12	2·21	8	2·18	18	2·19	14	2·58	12. Leaky
—	—	1	0·44	10	1·22	6	1·15	13. Loss of anchors or chains
107	19·67	75	21·44	140	17·03	99	17·69	14. Machinery damaged or short of coals
6	1·10	5	1·45	4	0·49	5	0·85	15. Mutiny, sickness, casualty to crew, or refusing duty
32	5·88	16	4·58	115	13·99	67	11·90	16. Ship damaged, loss of sails, bulwarks, &c.
—	—	—	—	—	—	—	—	17. Water-logged
544	—	352	—	822	—	560	—	Number of casualties
531	—	341	—	806	—	542	—	Number of steamers

5.—*A Table showing the Results of Wrecks and Casualties to Ship and to Cargo, with List," during the Four Quarters of* 1875, *and the respective Percentages thereon, Compared*

	Sailing Vessels.							
	First Quarter.				Second Quarter.			
	1875.		Average Nine previous Years.		1875.		Average Nine previous Years.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Results to Ship—								
Total loss	412	17·75	549	18·54	242	16·11	355	21·11
Constructive loss	28	1·21	56	1·89	27	1·79	40	2·36
Great damage	221	9·52	321	10·84	182	12·12	164	9·74
Minor damage	1,272	54·80	1,441	48·66	718	47·80	729	43·33
Raised after sinking	9	0·39	11	0·37	12	0·80	8	0·49
Not damaged or results unknown	379	16·33	583	19·70	321	21·37	386	22·97
Total	2,321	—	2,961	—	1,502	—	1,682	—
Results to Cargo so far as reported—								
All lost	211	9·09	338	11·43	121	8·05	190	11·16
Part lost	130	5·60	164	5·54	74	4·93	90	5·38
All saved	7	0·30	14	0·48	3	0·20	6	0·38
Forwarded	1	0·40	9	0·29	3	0·20	6	0·34
Heated	4	0·17	8	0·27	2	0·13	3	0·17
Shifted	23	0·99	49	1·66	17	1·13	18	1·10
Otherwise damaged	34	1·47	43	1·46	27	1·79	27	1·60
Salvage services	178	7·67	311	10·51	122	8·12	148	8·81
Lives—								
Crews saved	258	11·12	273	9·22	160	10·65	155	9·24
Crews drowned	38	1·64	25	0·84	22	1·46	20	1·24
Lives lost so far as reported in both ships and steamers	262	—	386	—	558	—	492	—

Salvage Services, Crews Saved or Drowned and Lives Lost, so far as reported in "Lloyd's with the Average Number and Percentages for the same period of the Nine Previous Years.

Sailing Vessels.								
Third Quarter.				Fourth Quarter.				
1875.		Average Nine previous Years.		1875.		Average Nine previous Years.		
Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	
								Results to Ship—
251	13·63	361	19·53	707	16·01	735	20·45	Total loss
24	1·30	41	2·22	35	0·79	46	1·29	Constructive loss
179	9·72	222	12·01	356	8·06	427	11·88	Great damage
849	46·12	801	43·28	2,369	53·66	1,645	45·75	Minor damage
17	0·92	7	0·40	17	0·39	7	0·19	Raised after sinking
521	28·30	418	22·56	931	21·09	735	20·44	Not damaged or results unknown
1,841	—	1,852	—	4,415	—	3,595	—	Total
								Results to Cargo so far as reported—
122	6·63	183	9·87	304	6·89	370	10·30	All lost
65	3·53	88	4·73	269	6·10	207	5·79	Part lost
2	0·11	6	0·31	2	0·05	10	0·28	All saved
1	0·05	4	0·25	2	0·05	4	0·11	Forwarded
3	0·16	3	0·20	2	0·05	5	0·15	Heated
15	0·81	16	0·88	52	1·18	53	1·47	Shifted
31	1·68	31	1·67	47	1·06	35	0·98	Otherwise damaged
96	5·21	160	8·66	310	7·02	331	9·22	Salvage services
								Lives—
149	8·09	161	8·71	400	9·06	346	9·64	Crews saved
17	0·92	13	0·70	45	1·02	28	0·79	Crews drowned
280	—	243	—	729	—	571	—	Lives lost so far as reported in both ships and steamers

5.—*A Table showing the Results of Wrecks and Casualties to Ship and Cargo,*

	Steamers.							
	First Quarter.				Second Quarter.			
	1875.		Average Nine previous Years.		1875.		Average Nine previous Years.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Results to Ship—								
Total loss	47	7·11	38	8·99	31	6·44	26	8·42
Constructive loss	3	0·45	3	0·74	—	—	2	0·71
Great damage	23	3·48	32	7·70	34	7·07	24	7·68
Minor damage	338	51·13	182	43·10	246	51·14	128	40·87
Raised after sinking	5	0·76	3	0·63	3	0·62	3	0·99
Not damaged or results unknown	245	37·07	164	38·84	167	34·72	130	41·33
Total	661	—	423	—	481	—	314	—
Results to Cargo so far as reported—								
All lost	22	3·33	16	3·84	7	1·45	10	3·33
Part lost	24	3·63	15	3·68	27	5·61	14	4·60
All saved	1	0·15	1	0·21	2	0·42	—	—
Forwarded	—	—	1	0·18	1	0·21	—	—
Heated	2	0·30	—	—	—	—	—	—
Shifted	10	1·51	7	1·60	6	1·25	2	0·53
Otherwise damaged	13	1·97	9	2·21	19	3·95	5	0·73
Salvage service	43	6·51	32	7·52	36	7·48	27	8·67
Lives—								
Crews saved	31	4·69	17	3·99	14	2·91	12	3·75
Crews drowned	4	0·61	3	0·74	1	0·21	1	0·32
Lives lost so far as reported in both ships and steamers (see Sailing Vessels, *supra*)	—	—	—	—	—	—	—	—

with Salvage Services, Crews Saved or Drowned and Lives Lost—Contd.

Steamers.								
Third Quarter.				Fourth Quarter.				
1875.		Average Nine previous Years.		1875.		Average Nine previous Years.		
Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	
								Results to Ship—
30	5·65	31	9·19	65	8·06	50	9·20	Total loss
3	0·57	2	0·49	—	—	2	0·43	Constructive loss
34	6·40	30	8·74	28	3·47	45	8·23	Great damage
241	45·38	133	38·96	370	45·91	219	40·48	Minor damage
1	0·19	3	0·85	7	0·87	4	0·84	Raised after sinking
222	41·81	142	41·77	336	41·69	221	40·82	Not damaged or results unknown
531	—	341	—	806	—	542	—	Total
								Results to Cargo so far as reported—
11	2·07	11	3·29	22	2·73	17	3·20	All lost
25	4·71	13	3·88	30	3·72	22	4·16	Part lost
1	0·19	—	—	2	0·25	1	0·12	All saved
—	—	—	—	—	—	—	—	Forwarded
—	—	—	—	—	—	—	—	Heated
3	0·57	2	0·65	22	2·73	10	1·88	Shifted
14	2·64	8	2·28	19	2·39	12	2·19	Otherwise damaged
24	4·52	24	7·14	42	5·21	39	7·25	Salvage service
								Lives—
21	3·95	12	3·45	26	3·22	17	3·15	Crews saved
1	0·19	—	—	5	0·62	1	0·25	Crews drowned
—	—	—	—	—	—	—	—	Lives lost so far as reported in both ships and steamers (see Sailing Vessels, *supra*)

III.—*Underwriting in the Year* 1805.

THROUGH the courtesy of two or three members of Lloyd's, we are enabled to place before our readers what we consider to be an interesting relic of underwriting business during the war period, namely, an underwriting account of the year 1805, with its results, so far as ascertained, to the 30th June, 1806, inclusive. A note is made by the underwriter, that considerable loss accrued through the captures made by a "French squadron" in the West Indies and off the islands.

To increase the value of the contribution, we have been permitted by our friends to add the tabulated results over the lengthened term of twenty-one years of the aggregate accounts of various underwriters, showing the *average monthly percentages* of profit or loss.

Results of an Underwriting Account written in the Year 1805, *taken up to* 30*th June*, 1806, *inclusive.*

Number.	Geographically Divided. Voyage.	Amount of		Amount of		Percentage of	
		Premium.	*Returns.*	Profit.	*Loss.*	Profit.	*Loss.*
		£	£	£	£		
1	To the West Indies	1,241	814	427	—	34·41	—
2	From ,,	3,671	4,461	—	790	—	21·52
3	To Jamaica	980	470	510	—	52·04	—
4	From ,,	4,115	3,382	733	—	17·81	—
5	To Ireland	189	104	85	—	44·97	—
6	From ,,	333	476	—	143	—	42·94
7	Coasters	931	292	639	—	68·64	—
8	To America	503	57	446	—	88·67	—
9	From ,,	601	345	256	—	42·60	—
10	To and from Africa and Mogadore	229	360	—	131	—	57·21
11	To Portugal	741	735	6	—	0·81	—
12	From ,,	371	149	222	—	59·84	—
13	To Gibraltar and Mediterranean	525	600	—	75	—	14·29
14	From Newfoundland	18	8	10	—	55·56	—
15	To and from South Sea and Greenland Fishing	24	—	24	—	100·00	—
16	Time "Risques"	209	118	91	—	43·54	—
17	From Gibraltar and Mediterranean	656	302	354	—	53·96	—
18	To the East Indies	406	30	376	—	92·61	—
19	,, and back	531	206	325	—	61·21	—
20	From ,,	1,096	863	233	—	21·26	—
21	To and from North Sea	740	311	429	—	57·97	—
22	Cross "Risques"	886	930	—	44	—	4·97
23	To the Baltic	355	172	183	—	51·55	—
24	,, and back	64	29	35	—	54·69	—
25	From ,,	672	439	233	—	34·67	—
26	Lives	98	—	98	—	100·00	—
27	Peace "Risques"	104	—	104	—	100·00	—
28	To Newfoundland	33	104	—	71	—	215·15
29	Cross "Risques" in the East Indies	283	274	9	—	3·18	—
	Total	20,605	16,031	5,828	1,254	—	—

Note.—Losses to the extent of 700*l.* were known of, but had not been settled.

Monthly Totals and Results.

	Amount Covered.	Amount of Premium.	Percentage of Premium.	Amount of Returns.	Amount of		Percentage of		Average Percentage for 21 Years.	
					Profit.	*Loss.*	Profit.	*Loss.*	Profit.	*Loss.*
	£	£		£	£	£				
January....	30,981	1,900	6·13	1,072	828	—	43·58	—	9·10	—
February	28,327	1,689	5·96	1,707	—	18	—	1·07	0·69	—
March	46,408	2,868	6·18	2,177	691	—	24·09	—	8·96	—
April	47,832	3,058	6·39	3,155	—	97	—	3·17	13·67	—
May	25,842	942	3·65	468	474	—	50·32	—	20·03	—
June	41,090	3,184	7·75	2,051	1,133	—	35·58	—	22·08	—
July	32,877	2,180	6·63	1,869	311	—	14·27	—	14·34	—
August	11,890	352	2·96	110	242	—	68·75	—	2·58	—
September	17,870	766	4·29	581	185	—	24·15	—	4·51	—
October....	24,913	1,276	5·12	661	615	—	48·20	—	8·03	—
November	31,707	1,444	4·55	1,514	—	70	—	4·85	—	5·39
December	18,900	946	5·01	1,366	—	420	—	44·40	—	48·48
Total	358,637	20,605	5·75	16,731	3,874	—	18·80	—	—	—

Note.—In this monthly table the known but unsettled losses are included.

REGISTRATION OF THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES—QUARTER ENDED MARCH, 1876.

BIRTHS AND DEATHS—QUARTER ENDED JUNE, 1876.

A.—*Serial Table of* MARRIAGES, BIRTHS, *and* DEATHS, *returned in the Years* 1876-70, *and in the* QUARTERS *of those Years.*

Calendar YEARS, 1876-70:—*Numbers.*

Years.........	'76.	'75.	'74.	'73.	'72.	'71.	'70.
Marriages No.	—	200,980	202,010	205,615	201,267	190,112	181,655
Births........ ,,	—	850,187	854,956	829,778	825,907	797,428	792,787
Deaths .... ,,	—	546,317	526,632	492,520	492,265	514,879	515,329

QUARTERS *of each Calendar Year*, 1876-70.

(I.) MARRIAGES:—*Numbers.*

Qrs. ended last day of	'76.	'75.	'74.	'73.	'72.	'71.	'70.
March........ No.	41,757	42,237	41,413	41,217	40,539	36,305	36,455
June .... ,,	—	48,360	52,827	53,408	50,380	48,831	46,720
September ,,	—	49,817	49,144	49,709	49,818	46,536	43,900
December ,,	—	60,566	58,626	61,281	60,530	58,440	54,580

(II.) BIRTHS:—*Numbers.*

Qrs. ended last day of	'76.	'75.	'74.	'73.	'72.	'71.	'70.
March........ No.	229,980	215,251	214,514	215,744	208,752	209,523	206,366
June .... ,,	225,866	214,650	217,598	206,516	208,790	201,165	203,615
September ,,	—	210,781	210,323	204,167	201,746	193,271	192,521
December ,,	—	209,505	212,521	203,351	206,619	193,469	190,285

(III.) DEATHS:—*Numbers.*

Qrs. ended last day of	'76.	'75.	'74.	'73.	'72.	'71.	'70.
March........ No.	142,269	162,514	136,518	132,432	134,952	138,393	143,773
June .... ,,	126,212	130,797	123,907	118,582	120,835	120,793	121,128
September ,,	—	121,459	124,253	114,676	118,927	121,332	124,297
December ,,	—	131,547	141,954	126,830	117,551	134,361	126,131

Annual Rates of MARRIAGES, BIRTHS, *and* DEATHS, *per* 1,000 PERSONS LIVING *in the Years* 1876-70, *and the* QUARTERS *of those Years.*

Calendar YEARS, 1876-70:—*General Ratios.*

YEARS	'76.	Mean '66–75.	'75.	'74.	'73.	'72.	'71.	'70.
Estmtd. Popln. of England *in thousands* in middle of each Year....	24,244,	—	23,944,	23,649,	23,356,	23,068,	22,783,	22,501,
Persons Married	—	16·8	16·8	17·1	17·6	17·5	16·7	16·1
Births	—	35·4	35·5	36·2	35·5	35·8	35·0	35·2
Deaths................	—	22·2	22·8	22·3	21·1	21·3	22·6	22·9

QUARTERS *of each Calendar Year*, 1876-70.

(I.) PERSONS MARRIED :—*Ratio per* 1,000.

Qrs. ended last day of	'76.	Mean '66–75.	'75.	'74.	'73.	'72.	'71.	'70.
March	13·8	13·8	14·3	14·2	14·3	14·1	12·9	13·2
June....................	—	17·1	16·2	17·9	18·3	17·5	17·2	16·7
September	—	16·4	16·5	16·5	16·9	17·1	16·2	15·5
December	—	19·8	20·1	19·7	20·8	20·8	20·4	19·2

(II.) BIRTHS:—*Ratio per* 1,000.

Qrs. ended last day of	'76.	Mean '66–75.	'75.	'74.	'73.	'72.	'71.	'70.
March	38·0	36·9	36·5	36·8	37·5	36·3	37·3	37·3
June....................	37·4	36·1	36·0	36·9	35·5	36·3	35·5	36·4
September	—	34·5	34·9	35·3	34·7	34·7	33·7	34·0
December	—	34·5	34·7	35·7	34·5	35·5	33·7	33·6

(III.) DEATHS:—*Ratio per* 1,000.

Qrs. ended last day of	'76.	Mean '66–75.	'75.	'74.	'73.	'72.	'71.	'70.
March	23·5	24·6	27·5	23·4	23·0	23·5	24·7	26·0
June....................	20·9	21·4	21·9	21·0	20·4	21·0	21·3	21·6
September	—	21·0	20·1	20·8	19·5	20·5	21·1	22·0
December	—	22·1	21·8	23·8	21·5	20·2	23·4	22·3

B.—*Comparative Table of* CONSOLS, PROVISIONS, PAUPERISM, *and* COAL *in each of the Nine* QUARTERS *ended June*, 1876.

1	2	3	4		5	6	7	8	9	10	
Quarters ending	Average Price of Consols (for Money).	Average Rate of Bank of England Discount.	Average Price of Wheat per Quarter in England and Wales.		Average Prices of Meat per lb. at the Metropolitan Meat Market (by the Carcass), with the *Mean* Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism. Quarterly Average of the Number of Paupers relieved on the *last day* of each week.		Sea-borne Coal in London Market per Ton.	
					Beef.	Mutton.		In-door.	Out-door.		
1874	£		*s.*	*d.*	*d. d. d.*	*d. d. d.*	*s. s. s.*			*s.*	*d.*
June 30	93	3·4	61	1	5—8 6½	5—8¼ 6⅝	135—165 150	133,844	614,641	23	7
Sept. 30	92⅝	3·0	55	5	5¼—8 6⅝	5¼—7¾ 6½	75—104 90	129,993	592,989	23	3
Dec. 31	93	4·6	44	4	4⅞—8¼ 6⅝	4¾—8 6⅜	73—96 84	138,868	587,772	24	7
1875 Mar. 31	92¾	3·7	42	6	5—8 6½	4¾—8 6⅜	81—111 96	146,708	622,652	22	5
June 30	93¾	3·5	42	6	5¼—8¼ 6¾	5½—9½ 7½	80—120 100	131,717	592,362	20	8
Sept. 30	94⅜	2·4	49	–	5½—8½ 7	5½—9½ 7½	70—93 82	125,614	555,409	20	4
Dec. 31	94⅜	3·2	46	7	5½—8 6⅞	6—9¼ 7⅝	105—127 116	136,124	546,251	22	6
1876 Mar. 31	94⅛	4·1	43	8	5½—8 6¾	5½—9 7¼	121—151 136	145,088	558,026	19	9
June 30	95½	2·2	45	10	5—8¼ 6⅝	5—10 7½	125—170 147	134,376	535,431	18	8

C.—*General Average Death-Rate Table:—Annual Rate of Mortality to* 1,000 *of the Population in the Eleven Divisions of England.*

Divisions.	Average Annual Rate of Mortality to 1,000 Living in						
	Ten Years, 1861-70.	Year 1875.	1875. Quarters ending			1876. Quarters ending	
			June.	Sept.	Dec.	March.	June.
England and Wales	22·4	22·8	21·9	20·1	21·8	23·5	20·9
I. London	24·3	23·7	21·9	21·5	24·3	24·7	20·9
II. South-Eastern counties	19·1	18·8	18·6	16·1	17·5	19·2	17·3
III. South Midland "	20·2	20·6	19·8	17·7	18·8	20·5	17·4
IV. Eastern counties	20·1	20·4	20·2	17·9	19·0	20·3	18·0
V. South-Western counties	19·9	20·4	20·1	15·9	19·6	21·5	19·6
VI. West Midland "	21·8	22·5	21·7	19·1	21·0	23·4	20·1
VII. North Midland "	20·8	22·9	21·8	21·2	21·2	23·2	20·5
VIII. North-Western "	26·3	26·2	24·6	23·3	25·7	29·0	25·2
IX. Yorkshire	24·0	24·5	23·7	22·9	23·5	23·9	22·6
X. Northern counties	22·7	24·0	22·3	23·7	22·6	23·2	20·6
XI. Monmouthshire and Wales	21·6	22·6	23·4	18·1	20·5	23·2	22·4

D.—*Special Average Death-Rate Table:*—ANNUAL RATE *of* MORTALITY *per* 1,000 *in* TOWN *and* COUNTRY DISTRICTS *of* ENGLAND *in each Quarter of the Years* 1876-74.

	Area in Statute Acres.	Population Enumerated. 1871.	Quarters ending	Annual Rate of Mortality per 1,000 in each Quarter of the Years 1876.	Mean '66-75.	1875.	1874.
In 131 Districts, and 59 Sub-districts, comprising the *Chief Towns*	3,184,419	12,900,142	March ..	25·3	26·6	28·9	25·1
			June	22·1	22·8	22·7	22·3
			Sept.	—	23·7	22·3	23·4
			Dec.	—	24·6	23·9	26·5
			Year	—	24·4	24·5	24·3
In the remaining Districts and Sub-districts of England and Wales, comprising chiefly *Small Towns* and *Country Parishes*	34,134,802	9,812,124	Year	—	19·4	20·7	19·5
			March ..	21·1	22·1	25·7	21·2
			June ...	19·2	19·5	20·8	19·3
			Sept.	—	17·3	17·2	17·4
			Dec.	—	18·7	18·9	20·2

Note.—The three months January, February, March, contain 90, and in leap year 91 days; the three months April, May, June, 91 days; and each of the last two quarters of the year, 92 days. For this inequality a correction is made in calculating the rate of mortality in the different quarters of the year.

E.—*Special Town Table:*—POPULATION; BIRTHS, DEATHS; MEAN TEMPERATURE *and* RAINFALL *in the Second Quarter of* 1876, *in* TWENTY-THREE *Large Towns.*

Cities, &c.	Estimated Population in the Middle of the Year 1876.	Births in 13 Weeks ending 1st July, 1876.	Deaths in 13 Weeks ending 1st July, 1876.	Annual Rate to 1,000 Living during the 13 Weeks ending 1st July, 1876. Births.	Deaths.	Mean Temperature in 13 Weeks ending 1st July, 1876.	Rainfall in Inches in 13 Weeks ending 1st July, 1876.
Total of 23 towns in U. K.	8,028,959	75,637	45,929	37·8	23·0	50·6	5·68
London	3,489,428	31,469	18,218	36·2	21·0	51·9	3·48
Brighton	100,632	755	524	30·1	20·9	50·7	5·42
Portsmouth	124,867	1,078	679	34·7	21·8	—	—
Norwich	83,430	663	434	31·9	20·9	50·2	5·16
Plymouth	72,230	583	426	32·4	23·7	51·5	5·58
Bristol	199,539	1,832	1,089	36·9	21·9	51·7	4·58
Wolverhampton	72,549	678	447	37·5	24·7	50·4	7·31
Birmingham	371,839	3,933	1,990	42·5	21·5	—	—
Leicester	113,581	1,142	531	40·4	18·8	51·2	5·42
Nottingham	93,627	871	514	37·3	22·0	50·9	4·95
Liverpool	521,544	5,004	3,557	38·5	27·4	49·8	4·58
Manchester	357,917	3,676	2,591	41·2	29·1	51·4	7·30
Salford	138,425	1,738	1,048	50·4	30·4	49·5	7·07
Oldham	88,609	1,017	643	46·1	29·1	—	—
Bradford	173,723	1,688	1,049	39·0	24·2	49·6	5·16
Leeds	291,580	3,125	1,777	43·0	24·5	50·6	5·11
Sheffield	274,914	2,848	1,644	41·6	24·0	50·3	6·68
Hull	136,933	1,485	709	43·5	20·8	49·9	5·48
Sunderland	108,343	1,087	511	40·3	18·9	49·9	6·25
Newcastle-on-Tyne	139,929	1,392	760	39·9	21·8	—	5·99
Edinburgh	215,146	1,796	1,164	33·5	21·7	—	—
Glasgow	545,144	5,505	3,584	40·5	26·4	50·7	7·16
Dublin	314,666	2,272	2,040	29·0	26·0	51·2	5·31

F.—*Divisional Table:*—MARRIAGES *Registered in Quarters ended 31st March,* 1876-74; *and* BIRTHS *and* DEATHS *in Quarters ended 30th June,* 1876-74.

1	2	3	4	5	6
DIVISIONS. (England and Wales.)	AREA* in Statute Acres.	POPULATION, 1871. (*Persons.*)	MARRIAGES in Quarters ended 31st March.		
			1876.	1875.	1874.
		No.	No.	No.	No.
ENGLD. & WALES....*Totals*	37,319,221	22,712,266	41,757	42,237	44,262
I. London	75,362	3,254,260	6,683	7,039	6,523
II. South-Eastern	3,994,431	2,167,726	3,271	3,235	2,971
III. South Midland	3,201,325	1,442,654	1,721	1,742	1,740
IV. Eastern	3,211,441	1,218,728	1,506	1,590	1,596
V. South-Western	4,981,170	1,880,777	2,773	2,799	2,823
VI. West Midland	3,945,460	2,720,669	4,712	4,702	4,763
VII. North Midland	3,535,445	1,406,935	2,339	2,465	2,404
VIII. North-Western	1,998,914	3,389,044	7,918	7,870	7,343
IX. Yorkshire	3,702,384	2,395,569	5,440	5,249	5,155
X. Northern	3,547,947	1,414,234	2,939	3,162	3,254
XI. Monmthsh. & Wales	5,125,342	1,421,670	2,455	2,384	2,845

7	8	9	10	11	12	13
DIVISIONS. (England and Wales.)	BIRTHS in Quarters ended 30th June.			DEATHS in Quarters ended 30th June.		
	1876.	1875.	1874.	1876.	1875.	1874.
	No.	No.	No.	No.	No.	No.
ENGLD. & WALES....*Totals*	225,866	214,650	231,998	126,211	130,797	132,654
I. London	31,469	30,020	30,038	18,218	18,838	16,873
II. South-Eastern	18,433	17,369	17,757	10,212	10,740	9,722
III. South Midland	12,994	11,897	12,284	6,652	7,459	6,515
IV. Eastern	10,472	10,235	10,234	5,679	6,311	5,826
V. South-Western	14,730	13,996	14,451	9,290	9,538	8,907
VI. West Midland	27,694	26,025	26,831	14,441	15,384	14,339
VII. North Midland	14,508	13,457	13,637	7,537	7,951	7,081
VIII. North-Western	37,627	35,753	36,225	22,956	22,090	22,717
IX. Yorkshire	27,182	24,838	25,025	15,128	15,268	14,210
X. Northern	16,171	16,926	16,730	7,784	8,589	9,136
XI. Monmthsh. & Wales	14,586	14,134	14,393	8,315	8,621	8,664

* These are revised figures, and will be found to differ somewhat from those first published.

G.—*General Meteorological Table, Quarter ended 30th June*, 1876.

[Abstracted from the particulars supplied to the Registrar-General by JAMES GLAISHER, ESQ., F.R.S., &c.]

1876. Months.	Temperature of Air. Mean.	Air. Diff. from Average of 105 Years.	Air. Diff. from Average of 35 Years.	Evaporation. Mean.	Evaporation. Diff. from Average of 35 Years.	Dew Point. Mean.	Dew Point. Diff. from Average of 35 Years.	Air—Daily Range. Mean.	Air—Daily Range. Diff. from Average of 35 Years.	Water of the Thames	Elastic Force of Vapour. Mean.	Elastic Force of Vapour. Diff. from Average of 35 Years.	Weight of Vapour in a Cubic Foot of Air. Mean.	Weight of Vapour. Diff. from Average of 35 Years.
	°	°	°	°	°	°	°	°	°	°	In.	In.	Grs.	Gr.
April ...	47·2	−1·1	0·0	44·0	−0·1	40·4	−0·2	18·2	−0·5	50·0	·251	−·003	2·9	0·0
May......	49·4	−3·1	−3·4	45·1	−4·0	40·5	−4·8	22·4	+1·9	53·3	·253	−·048	2·9	−0·5
June ...	58·5	+0·3	−0·4	53·8	−0·7	49·6	−1·1	22·4	+1·3	61·4	·356	−·014	4·0	−0·1
Mean ...	51·7	−1·3	−1·3	47·6	−1·6	43·5	−2·0	21·0	+0·9	54·9	·287	−·022	3·3	−0·2

1876. Months.	Degree of Humidity. Mean.	Degree of Humidity. Diff. from Average of 35 Years.	Reading of Barometer. Mean.	Reading of Barometer. Diff. from Average of 35 Years.	Weight of a Cubic Foot of Air. Mean.	Weight of a Cubic Foot of Air. Diff. from Average of 35 Years.	Rain. Amnt.	Rain. Diff. from Average of 61 Years.	Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass. Number of Nights it was At or below 30°.	Number of Nights it was Between 30° and 40°.	Number of Nights it was Above 40°.	Lowest Reading at Night.	Highest Reading at Night.
			In.	In.	Grs.	Grs.	In.	In.	Miles.				°	°
April ...	78	0	29·680	− ·091	542	− 1	1·3	−0·4	318	8	17	5	25·1	43·0
May......	72	− 4	29·956	+ ·173	545	+ 4	1·1	−1·0	279	9	16	6	25·3	44·5
June ...	73	− 1	29·816	+ ·003	532	0	1·1	+0·9	235	0	7	23	32·1	55·8
Mean ...	74	− 2	29·817	+ ·028	540	+ 1	Sum 3·5	Sum −2·3	Mean 277	Sum 17	Sum 40	Sum 34	Lowest 25·1	Highst 55·8

Note.—In reading this table it will be borne in mind that the sign (−) minus signifies below the average, and that the sign (+) plus signifies above the average.

The mean temperature of the air for April was 47°·2 being 1°·1 below the average of the preceding 105 years; and the same as the average of the preceding 35 years; it was 2°·8 below that of 1874, and 0°·9 below that of 1875.

The mean temperature of the air for May was 49°·4, being 3°·4 and 3°·1 below the averages of the preceding 35 years and 105 years respectively; it was 1°·1 and 5°·6 below the corresponding values in 1874 and 1875.

The mean temperature of the air for June was 58°·5, being 0°·4 below the average of the preceding 35 years, and 0°·3 above the average of the preceding 105 years; it was 0°·5 above that of 1874, and 0°·4 below that of 1875.

The mean high day temperatures of the air were 0°·2 and 2°·9 below their respective averages in April and May; and 0°·1 above in June.

The mean low night temperatures of the air were 4°·8 and 1°·2 below their respectives averages in May and June; and 0°·4 above in April.

The mean daily ranges of temperature were 1°·9 and 1°·3 greater than their respective averages in May and June; and 0°·5 less in April.

H.—*Special Meteorological Table, Quarter ended* 30*th June*, 1876.

1	2	3	4	5	6	7	8	9
Names of Stations.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	*Mean Temperature of the Air.*	Mean Degree of Humidity.
	in.	°	°	°	°	°	°	
Guernsey	29·699	74·0	33·0	41·0	25·2	10·4	49·8	86
Osborne	29·682	84·9	30·1	54·8	38·0	20·1	52·1	85
Barnstaple	29·695	84·0	33·5	50·5	35·5	15·6	53·3	75
Blackheath	29·727	84·9	29·9	55·0	42·9	19·3	51·5	75
Royston	29·729	84·7	28·0	56·7	44·8	22·7	50·8	78
Norwich	29·673	81·2	29·2	52·0	39·9	15·4	50·7	84
Llandudno	29·715	86·0	31·4	54·6	37·6	15·4	51·2	73
Hull	29·706	76·0	27·0	49·0	39·3	16·6	50·3	78
Stonyhurst	29·700	81·1	25·0	56·1	41·0	18·0	49·4	80
Bradford	29·707	78·4	30·2	48·2	36·2	13·5	50·0	73
North Shields	—	72·0	27·5	44·5	32·9	12·3	48·2	78

10	11	12	13	14	15	16	17	18
Names of Stations.	**Wind.**					Mean Amount of Cloud.	**Rain.**	
	Mean estimated Strength.	Relative Proportion of					Number of Days on which it fell.	Amount Collected.
		N.	E.	S.	W.			in.
Guernsey	1·5	10	7	5	9	3·7	34	3·52
Osborne	0·2	8	7	8	7	4·8	28	2·87
Barnstaple	1·3	7	8	7	8	3·6	33	4·72
Blackheath	1·0	8	7	7	8	5·3	29	4·06
Royston	—	11	5	7	7	5·5	31	5·11
Norwich	—	10	8	6	6	—	37	4·92
Llandudno	0·8	5	9	4	11	5·2	30	5·50
Hull	—	—	—	—	—	—	39	5·38
Stonyhurst	—	6	7	5	12	6·7	42	7·92
Bradford	0·8	8	8	5	10	6·5	40	5·19
North Shields	1·5	9	8	6	8	5·4	43	6·23

No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER ENDED 30TH JUNE, 1876.

I.—*Serial Table:—Number of Births, Deaths, and Marriages in Scotland, and their Proportion to the Population estimated to the Middle of each Year, during each Quarter of the Years* 1876-72 *inclusive.*

	1876.		1875.		1874.		1873.		1872.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1st Quarter—										
Births	32,333	3·67	31,096	3·56	29,837	3·45	30,210	3·52	29,506	3·47
Deaths	21,294	2·41	25,116	2·87	20,775	2·40	21,443	2·50	21,245	2·50
Marriages ..	6,663	0·75	6,369	0·73	6,777	0·78	6,618	0·77	5,820	0·68
Mean Temperature	37°·9		38°·7		40°·9		38°·1		40°·7	
2nd Quarter—										
Births	33,088	3·75	32,294	3·70	32,295	3·73	31,283	3·64	30,726	3·61
Deaths	19,270	2·18	19,518	2·23	19,640	2·27	19,931	2·32	19,045	2·24
Marriages ..	6,459	0·73	6,638	0·76	6,730	0·78	6,690	0·78	6,398	0·75
Mean Temperature	49°·2		50°·73		49°·53		49°·2		49°·2	
3rd Quarter—										
Births	—	—	30,123	3·45	30,702	3·55	28,975	3·38	29,181	3·43
Deaths	—	—	18,050	2·07	18,099	2·09	17,072	1·99	16,692	1·96
Marriages ..	—	—	5,723	0·65	5,582	0·64	5,816	0·68	5,891	0·69
Mean Temperature	—		57°·27		56°·03		55°·4		55°·8	
4th Quarter—										
Births	—	—	30,180	3·45	30,961	3·58	29,270	3·41	29,460	3·46
Deaths	—	—	19,101	2·19	22,162	2·54	18,411	2·15	18,759	2·20
Marriages ..	—	—	7,191	0·82	7,158	0·83	7,606	0·88	7,471	0·88
Mean Temperature	—		41°·7		39°·5		42°·7		41°·8	
Year—										
Population.	3,527,811		3,495,214		3,462,916		3,430,923		3,399,226	
Births	—	—	123,693	3·54	123,795	3·57	119,738	3·49	118,873	3·49
Deaths	—	—	81,785	2·34	80,676	2·33	76,857	2·24	75,741	2·22
Marriages ..	—	—	25,921	0·74	26,247	0·76	26,730	0·78	25,580	0·75

II.—*Special Average Table:—Number of Births, Deaths, and Marriages in Scotland and in the Town and Country Districts during the Quarter ending 30th June,* 1876, *and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

Registration Groups of Districts.	Population.		Total Births.			Illegitimate Births.		
	Census, 1871.	Estimated to Middle of 1876.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,360,018	3,527,811	33,088	3·75	27	2,698	8·2	12·2
Principal towns ...	1,068,556	1,194,357	11,535	3·86	26	913	7·9	12·7
Large "	332,180	350,302	4,101	4·68	21	278	6·8	14·7
Small "	778,164	800,825	7,861	3·93	25	618	7·9	12·7
Mainland rural ...	1,049,114	1,052,754	8,819	3·35	30	850	9·6	10·4
Insular "	132,004	129,573	772	2·38	42	39	5·1	19·6

Registration Groups of Districts.	Population.		Deaths.			Marriages.		
	Census, 1871.	Estimated to Middle of 1876.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,360,018	3,527,811	19,270	2·18	46	6,459	0·73	137
Principal towns	1,068,556	1,194,357	7,272	2·44	41	2,593	0·87	115
Large "	332,180	350,302	2,346	2·68	37	760	0·87	115
Small "	778,164	800,825	4,318	2·16	46	1,389	0·69	145
Mainland rural	1,049,114	1,052,754	4,768	1·81	55	1,606	0·61	164
Insular "	132,004	129,573	566	1·75	57	111	0·34	294

III.—*Bastardy Table:—Proportion of Illegitimate in every Hundred Births in the Divisions and Counties of Scotland, during the Quarter ending 30th June,* 1876.

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
SCOTLAND	8·2						
Northern	6·7	Shetland	4·5	Forfar	10·3	Lanark........	6·7
		Orkney	4·8	Perth	10·5	Linlithgow .	7·4
North-Western	7·4	Caithness	9·8	Fife	6·8	Edinburgh .	7·9
North-Eastern	13·7	Sutherland....	6·5	Kinross	5·8	Haddington	7·0
		Ross and Cromarty	5·7	Clackmannan	5·2	Berwick	6·3
East Midland ..	9·0					Peebles........	2·6
West Midland.	6·5	Inverness	9·0	Stirling	6·8	Selkirk	8·0
		Nairn	11·9	Dumbarton ..	6·0	Roxburgh ..	11·9
South-Western	6·6	Elgin	12·8	Argyll	6·1	Dumfries	14·6
South-Eastern.	7·6	Banff	16·7	Bute	9·1	Kirkcudbright ..	13·5
		Aberdeen	13·3	Renfrew........	5·0		
Southern	12·7	Kincardine....	12·9	Ayr................	7·8	Wigtown	9·8

IV.—*Divisional Table:*—MARRIAGES, BIRTHS, *and* DEATHS *Registered in the Quarter ended* 30*th June*, 1876.

1	2	3	4	5	6
DIVISIONS. (Scotland)	AREA in Statute Acres.	POPULATION, 1871. (*Persons.*)	Marriages.	Births.	Deaths.
		No.	No.	No.	No.
SCOTLAND .... *Totals*	19,639,377	3,360,018	6,459	33,088	19,270
I. Northern	2,261,622	127,191	104	762	556
II. North-Western........	4,739,876	166,351	159	972	743
III. North-Eastern	2,429,594	393,199	665	3,369	1,598
IV. East Midland	2,790,492	559,676	1,062	5,018	3,091
V. West Midland	2,693,176	251,088	401	2,336	1,363
VI. South-Western........	1,462,397	1,183,218	2,593	14,428	8,229
VII. South-Eastern	1,192,524	475,523	1,102	4,546	2,667
VIII. Southern	2,069,696	203,772	373	1,657	1,023

No. III.—GREAT BRITAIN AND IRELAND.

SUMMARY *of* MARRIAGES, *in the Quarter ended* 31*st March*, 1876; *and* BIRTHS *and* DEATHS, *in the Quarter ended* 30*th June*, 1876.

COUNTRIES.	[000's omitted.]		Marriages.	Per 1,000 of Population.	Births.	Per 1,000 of Population.	Deaths.	Per 1,000 of Population.
	Area in Statute Acres.	Population, 1871. (*Persons.*)						
		No.	No.	Ratio.	No.	Ratio.	No.	Ratio.
England and Wales	37,325,	22,712,	41,757	1·8	225,866	9·9	126,212	5·5
Scotland	19,639,	3,360,	6,663	1·9	33,088	10·1	19,270	5·7
Ireland	20,323,	5,412,	10,450	1·9	37,398	6·9	25,602	4·7
GREAT BRITAIN AND IRELAND	77,287,	31,484,	58,870	1·9	296,352	9·4	171,084	5·4

Note.—The numbers against Ireland represent the marriages, births, and deaths that the local registrars have *succeeded* in recording; but how far the registration approximates to absolute completeness, does not at present appear to be known. It will be seen that the Irish ratios of births and deaths are much under those of England and Scotland.—ED. *S. J.*

Trade of United Kingdom, 1876-75-74.—*Distribution of* **Exports*** *from United Kingdom, according to the Declared Real Value of the Exports; and the Declared Real Value (Ex-duty) of* **Imports** *at Port of Entry, and therefore including Freight and Importer's Profit.*

Merchandise (*excluding Gold and Silver*) Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	First Six Months.					
	1876.		1875.		1874.	
	Imports from	*Exports to*	Imports from	*Exports to*	Imports from	*Exports to*
I.—Foreign Countries:	£	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland	11,263,	5,291,	10,909,	6,079,	13,897,	7,380,
Central Europe; viz., Germany, Holland, and Belgium	24,958,	18,651,	24,001,	20,443,	23,825,	21,548,
Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)	30,385,	12,264,	31,958,	11,044,	29,803,	12,741,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	3,218,	4,584,	3,821,	4,362,	2,653,	4,660,
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	9,782,	4,115,	8,254,	4,741,	8,958,	5,548,
Northern Africa; viz., Tripoli, Tunis, Algeria and Morocco	626,	310,	771,	231,	970,	285,
Western Africa	563,	448,	739,	375,	717,	441,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Mooria Islands	200,	217,	282,	189,	236,	208,
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	2,077,	1,191,	2,215,	1,455,	1,942,	849,
South Sea Islands	29,	20,	75,	14,	37,	20,
China and Japan, including **Hong Kong**	3,366,	5,041,	4,347,	5,753,	3,735,	5,095,
United States of America	42,219,	8,637,	39,277,	12,106,	43,346,	15,827,
Mexico and Central America	850,	524,	1,175,	718,	2,872,	507,
Foreign West Indies and Hayti	2,098,	1,649,	2,084,	1,536,	976,	1,202,
South America (Northern), New Granada, Venezuela, and Ecuador	602,	1,004,	632,	782,	631,	1,629,
" **(Pacific)**, Peru, Bolivia, Chili, and Patagonia	4,717,	1,645,	4,530,	2,187,	5,506,	2,112,
" **(Atlantic)** Brazil, Uruguay, and Buenos Ayres	4,219,	4,451,	5,721,	5,170,	5,166,	6,436,
Whale Fisheries; Grnlnd., Davis' Straits, Southn. Whale Fishery, & Falkland Islands	33,	8,	52,	—	33,	12,
Total—Foreign Countries	141,205,	70,050,	140,843,	77,171,	145,303,	86,500,
II.—British Possessions:						
British India, Ceylon, and Singapore	18,810,	12,577,	19,164,	13,308,	19,588,	13,642,
Austral. Cols.—N. So. W., Vict., and Queensld.	11,656,	5,640,	10,864,	6,618,	9,306,	5,771,
" " So. Aus., W. Aus., Tasm., and N. Zealand	5,550,	2,704,	4,985,	2,775,	4,886,	3,197,
British North America	1,411,	3,616,	1,392,	5,415,	1,484,	3,906,
" W. Indies with Btsh. Guiana & Honduras	3,660,	1,458,	3,945,	1,529,	3,245,	1,584,
Cape and Natal	2,061,	2,341,	2,248,	2,108,	1,993,	2,030,
Brt. W. Co. of Af., Ascension and St. Helena	520,	384,	272,	392,	267,	477,
Mauritius	602,	141,	550,	190,	692,	336,
Channel Islands	403,	299,	442,	337,	419,	388,
Total—British Possessions	44,673,	29,150,	43,862,	32,678,	41,880,	31,331,
General Total £	185,878,	99,210,	184,705,	109,843,	187,183,	117,831,

* *i.e.*, British and Irish produce and manufactures.

Trade of United Kingdom, 1875-71. — *Value of the Total Exports of* **Foreign** *and* **Colonial** *Produce and Manufactures to each Foreign Country and British Possession.*

Merchandise Exported to the following Foreign Countries, &c. [000's omitted.]	Declared Value.				
	1875.	1874.	1873.	1872.	1871.
I.—FOREIGN COUNTRIES.	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark, & Iceland, & Heligoland	5,478,	5,116,	4,891,	4,638,	4,491,
Central Europe; viz., Germany, Holland and Belgium	25,842,	24,016,	24,301,	26,257,	25,683,
Western Europe; viz., France, Portugal, (with Azores, Madeira, &c.), and Spain, (with Gibraltar and Canaries)	13,509,	14,560,	14,710,	12,673,	16,956,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	2,056,	2,105,	1,713,	1,888,	2,115,
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	655,	668,	579,	737,	626,
Northern Africa; viz., Tripoli, Tunis, Algeria, and Morocco	86,	93,	53,	39,	46,
Western Africa	259,	271,	288,	260,	199,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Mooria Islands	—	29,	—	—	2,
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	162,	34,	14,	21,	21,
South Sea Islands	—	—	—	—	2,
China, including **Hong Kong**	407,	441,	537,	657,	547,
United States of America	3,194,	3,996,	3,124,	5,171,	4,165,
Mexico and Central America	125,	216,	235,	102,	179,
Foreign West Indies and Hayti	406,	490,	30,	13,	315,
South America (Northern), New Granada, Venezuela and Ecuador	58,	45,	48,	49,	78,
" **(Pacific)**, Peru, Bolivia, Chili, and Patagonia	360,	262,	362,	693,	356,
" **(Atlantic)**, Brazil, Uruguay, and Buenos Ayres	452,	512,	518,	484,	337,
Other countries (unenumerated)	79,	438,	57,	44,	78,
Total—Foreign Countries	53,128,	52,995,	51,460,	53,726,	56,646,
II.—BRITISH POSSESSIONS:					
British India, Ceylon, and Singapore	1,537,	1,437,	1,082,	1,176,	1,142,
Austral. Cols.—New South Wales and Victoria, So. Aus., W. Aus., Tasm., and N. Zealand	1,733,	1,606,	1,615,	1,341,	1,062,
British North America	646,	879,	754,	1,131,	855,
" W. Indies with Btsh. Guiana & Honduras	362,	325,	324,	384,	382,
Cape and Natal	441,	400,	311,	288,	117,
Brt. W. Co. of Af., Ascension and St. Helena	95,	41,	79,	87,	94,
Mauritius	23,	69,	33,	30,	32,
Channel Islands	150,	99,	156,	155,	173,
Other possessions	31,	241,	16,	13,	6,
Total—British Possessions	5,021,	5,097,	4,370,	4,605,	3,863,
General Total £	58,149,	58,092,	55,830,	58,331,	60,509,

IMPORTS. — (United Kingdom.) — **First Six Months** (*January — June*), **1876-75-74-73-72.** — *Declared Real Value* (*Ex-duty*), *at Port of Entry* (*and therefore including Freight and Importer's Profit*), *of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.*

(Six Months.) [000's omitted.] FOREIGN ARTICLES IMPORTED.		1876.	1875.	1874.	1873.	1872.
		£	£	£	£	£
RAW MATLS.–*Textile*, &c.	Cotton Wool	25,721,	29,056,	31,094,	34,334,	35,691,
	Wool (Sheep's) ..	17,965,	17,191,	14,764,	12,924,	13,136,
	Silk*	6,662,	7,443,	7,589,	6,400,	6,197,
	Flax	1,503,	1,748,	2,763,	2,566,	2,322,
	Hemp	1,149,	2,713,	3,211,	2,956,	3,545,
	Indigo	1,648,	1,445,	1,844,	209,	295,
		54,648,	59,596,	61,265,	59,389,	61,176,
„ „ *Various.*	Hides	1,585,	3,467,	3,092,	3,329,	3,186,
	Oils	1,765,	2,011,	1,596,	2,269,	2,297,
	Metals	6,950,	6,762,	5,577,	5,516,	5,944,
	Tallow	1,551,	990,	1,269,	1,309,	1,634,
	Timber	5,134,	3,474,	6,997,	4,939,	3,666,
		16,985,	16,704,	18,531,	17,362,	16,731,
„ „ *Agrcltl.*	Guano	1,298,	370,	1,128,	826,	575,
	Seeds	4,073,	4,138,	3,239,	2,889,	3,420,
		5,371,	4,508,	4,367,	3,715,	3,995,
TROPICAL, &c., PRODUCE.	Tea	2,580,	4,016,	3,009,	3,641,	5,325,
	Coffee	4,546,	4,874,	4,527,	4,029,	2,884,
	Sugar & Molasses	8,858,	11,870,	11,185,	9,942,	9,714,
	Tobacco	1,153,	1,314,	1,274,	1,520,	1,021,
	Rice	1,339,	812,	1,561,	1,301,	1,010,
	Fruits	1,029,	1,157,	987,	868,	1,059,
	Wines	3,785,	3,565,	3,684,	4,181,	4,003,
	Spirits	2,223,	1,564,	1,392,	1,555,	1,184,
		25,513,	29,172,	27,619,	27,037,	26,200,
FOOD	Grain and Meal.	23,988,	21,909,	25,700,	23,359,	19,977,
	Provisions	16,350,	13,487,	12,586,	11,798,	9,710,
		40,338,	35,396,	38,286,	35,157,	29,687,
Remainder of Enumerated Articles		24,463,	20,618,	19,142,	21,163,	19,438,
TOTAL ENUMERATED IMPORTS		167,320,	166,094,	169,210,	163,823,	157,227,
Add for UNENUMERATED IMPORTS (say)		17,800,	17,750,	17,376,	18,100,	18,311,
TOTAL IMPORTS		185,120,	183,844,	186,586,	181,923,	175,538,

* "Silk," inclusive of manufactured silk, "not made up."

EXPORTS. — (United Kingdom.) — **First Six Months** (*January — June*), **1876-75-74-73-72.** — *Declared Real Value, at Port of Shipment, of Articles of* British *and* Irish *Produce and Manufactures Exported from United Kingdom.*

(Six Months.) British Produce, &c., Exported.	[000's omitted.]	1876.	1875.	1874.	1873.	1872.
		£	£	£	£	£
Manfrs.—*Textile.*	Cotton Manufactures..	25,190,	26,321,	26,948,	30,633,	30,207,
	,, Yarn	6,175,	6,437,	7,250,	7,733,	7,992,
	Woollen Manufactures	9,418,	10,743,	11,063,	13,373,	15,986,
	,, Yarn	2,019,	2,389,	2,484,	2,622,	3,403,
	Silk Manufactures........	776,	842,	1,014,	916,	1,137,
	,, Yarn	477,	416,	621,	914,	747,
	Linen Manufactures	3,093,	3,873,	3,767,	3,951,	4,305,
	,, Yarn	902,	878,	865,	1,024,	1,042,
		48,050,	51,899,	54,012,	61,166,	64,819,
,, *Sewed.*	Apparel	1,404,	1,501,	1,505,	1,629,	1,416,
	Haberdy. and Mllnry.	1,877,	2,638,	2,971,	3,161,	3,159,
		3,281,	4,139,	4,476,	4,790,	4,575,
Metals, &c.	Hardware	1,801,	2,089,	2,083,	2,428,	2,331,
	Machinery	3,627,	4,545,	4,656,	4,668,	3,512,
	Iron	10,068,	12,936,	15,786,	19,167,	16,007,
	Copper and Brass........	1,752,	1,806,	1,960,	1,842,	1,760,
	Lead and Tin	635,	594,	953,	682,	883,
	Coals and Culm	4,222,	4,348,	5,823,	6,411,	3,970,
		22,105,	26,318,	31,261,	35,198,	28,463,
Ceramic Manufcts.	Earthenware and Glass	1,326,	1,413,	1,369,	1,749,	1,454,
Indigenous Mnfrs. and Products.	Beer and Ale................	1,108,	1,302,	1,452,	1,383,	1,178,
	Butter	96,	115,	120,	127,	143,
	Cheese	34,	39,	32,	36,	37,
	Candles	68,	82,	91,	96,	112,
	Salt..............................	254,	325,	317,	360,	217,
	Spirits	139,	133,	81,	111,	98,
	Soda	—	—	—	1,426,	1,146,
		1,699,	1,996,	2,093,	3,539,	2,931,
Various Manufcts.	Books, Printed	394,	399,	384,	388,	368,
	Furniture	—	—	—	—	—
	Leather Manufactures	887,	904,	1,635,	1,708,	1,764,
	Soap	145,	154,	125,	117,	149,
	Plate and Watches	98,	121,	508,	128,	81,
	Stationery	317,	326,	330,	317,	290,
		1,841,	1,904,	2,982,	2,658,	2,652,
Remainder of Enumerated Articles		12,344,	13,864,	13,388,	8,397,	7,660,
Unenumerated Articles..............................		8,560,	8,310,	8,250,	8,290,	7,049,
Total Exports....................		99,210,	109,843,	117,831,	125,787,	119,603,

SHIPPING.—(United Kingdom.)—*Account of Tonnage of Vessels Entered and Cleared with Cargoes, from and to Various Countries, during the* **Six Months** *ended June,* 1876-75-74.

Countries from whence Entered and to which Cleared.	Total British and Foreign.					
	1876.		1875.		1874.	
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
FOREIGN COUNTRIES.						
Russia { Northern ports	251,777	406,256	214,572	282,152	350,304	391,344
Russia { Southern ,, ...	132,276	99,718	201,658	85,455	110,497	63,701
Sweden	349,202	323,808	199,929	261,628	458,253	300,920
Norway	440,002	155,224	341,553	171,520	480,280	148,713
Denmark	113,770	263,907	83,835	250,343	86,035	254,952
Germany	727,724	1,130,247	675,218	1,021,695	774,140	999,122
Holland	502,714	562,297	431,552	486,956	401,142	464,819
Belgium	461,315	503,206	419,958	472,819	407,604	403,350
France	915,985	1,510,982	929,991	1,302,114	788,604	1,160,055
Spain	438,824	320,618	347,363	284,567	428,321	272,973
Portugal	121,116	169,418	131,548	155,913	151,480	150,131
Italy	155,823	453,305	147,254	401,644	117,979	355,436
Austrian territories	15,353	44,968	23,060	42,436	15,084	45,553
Greece	4,982	28,145	62,376	39,138	56,877	30,114
Turkey (including Wallachia and Moldavia)	212,901	161,382	122,610	147,969	111,838	165,939
Egypt	219,703	213,565	145,898	203,031	151,199	257,819
United States of America	2,125,694	1,028,371	1,739,134	944,984	1,954,525	1,065,611
Mexico, Foreign West Indies, and Central America	138,314	196,152	146,363	216,367	179,032	206,884
Brazil	112,900	202,293	150,008	201,194	117,943	261,497
Peru	142,715	26,282	107,725	77,909	154,640	40,277
Chili	27,695	118,458	32,426	141,641	45,730	106,798
China	37,111	15,669	45,045	16,097	34,334	9,687
Other countries	280,511	289,794	280,472	289,391	272,180	307,639
Total, Foreign Countries	7,928,407	8,224,065	6,979,548	7,496,963	7,648,021	7,463,334
BRITISH POSSESSIONS.						
North American Colonies	149,677	341,071	149,809	312,480	147,815	370,469
East Indies, including Ceylon, Singapore, and Mauritius	574,688	639,832	473,461	608,882	471,186	553,962
Australia and New Zealand	223,645	243,093	167,302	285,228	169,357	277,055
West Indies	100,060	78,632	111,231	90,490	98,782	68,591
Channel Islands	133,412	81,318	121,602	78,775	122,772	76,200
Other possessions	125,654	428,070	106,391	356,383	105,441	406,780
Total, British Possessions	1,307,136	1,812,016	1,129,796	1,732,218	1,115,353	1,753,057
TOTAL FOREIGN COUNTRIES AND BRITISH POSSESSIONS.						
Six months ended June, { 1876	9,235,543	10,036,081	—	—	—	—
Six months ended June, { '75	—	—	8,109,344	9,229,181	—	—
Six months ended June, { '74	—	—	—	—	8,763,374	9,216,391

GOLD AND SILVER BULLION AND SPECIE.—IMPORTED AND EXPORTED.—(United Kingdom.)—*Declared Real Value for the* **Six Months** (*January—June*), **1876-75-74.**

[000's omitted.]

(First Six Months.)	1876.		1875.		1874.	
	Gold.	*Silver.*	Gold.	*Silver.*	Gold.	*Silver.*
Imported from—	£	£	£	£	£	£
Australia	1,919,	11,	2,675,	18,	2,874,	9,
So. Amca., including Mexico and W. Indies	737,	1,583,	564,	1,994,	1,337,	2,024,
United States	2,635,	1,294,	6,198,	1,293,	2,054,	2,047,
	5,291,	2,888,	9,437,	3,305,	6,265,	4,080,
France	510,	598,	1,011,	641,	232,	579,
Germany, Holl. & Belg.	1,091,	1,313,	495,	599,	161,	1,753,
Prtgl., Spain, and Gbrltr.	375,	36,	44,	20,	27,	26,
Mlta., Trky., and Egypt	212,	8,	31,	15,	254,	12,
China, including Hong Kong	515,	16,	138,	55,	200,	159,
West Coast of Africa	85,	10,	61,	10,	44,	9,
All other Countries	1,811,	374,	1,685,	285,	523,	617,
Totals Imported	9,890,	5,243,	12,902,	4,930,	7,706,	7,234,
Exported to—						
France	1,591,	882,	3,268,	1,032,	2,102,	436,
Germany, Holl. & Belg.	1,136,	402,	2,101,	209,	932,	200,
Prtgl., Spain, and Gbrltr.	515,	149,	796,	429,	48,	960,
	3,242,	1,433,	6,165,	1,670,	3,082,	1,596,
Ind. and China	18,	3,039,*	—	2,426,	542,	25,
United States	7,	—	255,	86,	8,	2,
South Africa	—	5,	—	—	4,	10,
So. Amca., including Mexico and W. Indies	95,	—	450,	—	244,	—
All other Countries	705,	594,	969,	096,	1,981,	4,979,
Totals Exported	4,067,	5,071,	7,839,	4,278,	5,871,	6,612,

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* This entry is now shown direct, instead of to Egypt as formerly.

REVENUE.—(UNITED KINGDOM.)—30TH JUNE, 1876-75-74-73.

Net Produce in QUARTERS *and* YEARS *ended 30th* JUNE, 1876-75-74-73.

[000's omitted.]

QUARTERS, ended 30th June.	1876.	1875.	1876.		Corresponding Quarters.	
			Less.	More.	1874.	1873.
	£	£	£	£	£	£
Customs	4,725,	4,687,	—	38,	4,563,	4,850,
Excise	6,599,	6,427,	—	172,	6,330,	6,287,
Stamps	2,780,	2,800,	20,	—	2,784,	2,645,
Taxes	454,	462,	8,	—	413,	362,
Post Office	1,460,	1,568,	108,	—	1,350,	1,180,
Telegraph Service	325,	300,	—	25,	300,	100,
	16,343,	6,244,	136,	235,	15,670,	15,424,
Property Tax	650,	778,	128,	—	1,072,	1,169,
	16,993,	17,022,	264,	235,	16,742,	16,593,
Crown Lands	83,	78,	—	5,	78,	75,
Miscellaneous	1,271,	1,166,	—	105,	853,	1,013,
Totals	18,347,	18,188,	264,	345,	17,673,	17,681,
			NET INCR. £81.			

YEARS, ended 30th June.	1876.	1875.	1876.		Corresponding Years.	
			Less.	More.	1874.	1873.
	£	£	£	£	£	£
Customs	20,058,	19,413,	—	645,	20,052,	20,939,
Excise	27,798,	27,492,	—	306,	27,215,	25,975,
Stamps	10,982,	10,626,	—	356,	10,619,	10,067,
Taxes	2,488,	2,489,	1,	—	2,375,	2,350,
Post Office	5,842,	5,888,	46,	—	5,962,	4,800,
Telegraph Service	1,270,	1,120,	—	150,	1,410,	890,
	68,438,	67,028,	47,	1,457,	67,633,	65,021,
Property Tax	3,981,	4,012,	31,	—	5,594,	7,065,
	72,419,	71,040,	78,	1,457,	73,227,	72,086,
Crown Lands	400,	385,	—	15,	378,	375,
Miscellaneous	4,393,	4,091,	—	302,	3,722,	3,435,
Totals	77,212,	75,516,	78,	1,774,	77,327,	75,896,
			NET INCR. £1,696,			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 30TH JUNE, 1876:—

An Account showing the REVENUE *and other* RECEIPTS *in the* QUARTER *ended* 30*th June*, 1876; *the* ISSUES *out of the same, and the Charges on the Consolidated Fund at that Date, and the Surplus or Deficiency of the Balance in the Exchequer on the* 30*th of June*, 1876, *in respect of such Charges.*

Received:—

		£
Income received, as shown in Account I		18,347,412
Amount raised on account of Local Loans, by Exchequer Bonds		500,000
Amount raised for purchase of Shares of the British Government in the Suez Canal (balance of 4,000,000*l.*)		700,000
Amount received in Repayment of Advances for Public Works, &c. ...		405,872
Total		£19,953,284
Excess of the Sums charged on the Consolidated Fund on the 30th of June, 1876, payable in September quarter, 1876, above the Balance in the Exchequer at that date, viz.:—		
Excess of Charge in Great Britain	£2,659,548	
Surplus over Charge in Ireland	526,115	
Net deficiency		*2,133,433
		£22,086,717

Paid:—

			£
Net deficiency of the balance in the Exchequer to meet the charge on the 31st of March, 1876, as per last account			1,647,967
Amount applied out of the Income to *Supply Services*			12,114,794
Charge of the *Consolidated Fund* on the 30th of June, 1876, viz.:—			
Permanent Charge of Debt—			
Interest of the Permanent Debt	£6,053,455		
Terminable Annuities	712,112		
Interest of Exchequer Bills, &c.	33,416		
		6,798,983	
Interest, &c., on Local Loans		13,125	
Other Consolidated Fund Charges:—			
The Civil List	102,160		
Other Charges	339,184		
		441,344	
Principal of Exchequer Bills		73,700	
Advances for Public Works, &c.		996,804	
			8,323,956
Total			£22,086,717

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* Charge on 30th June, 1876 (as above)	£8,323,956
Paid out of Growing Produce in June quarter, 1876	1,282,697
Portion of the Charge payable in September quarter, 1876 ...	7,041,259
To meet which there was in the Exchequer on the 30th of June, 1876	4,907,826
Net deficiency as above	2,133,433

BRITISH CORN.—*Gazette Average Prices* (ENGLAND AND WALES), *Second Quarter of* 1876.

[This Table is communicated by the Statistical and Corn Department, Board of Trade.]

Weeks ended on Saturday.	Weekly Average. (Per Impl. Quarter.)					
	Wheat.		Barley.		Oats.	
1876.	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
April 1	44	4	33	7	25	2
„ 8	45	2	33	10	25	11
„ 15	45	1	33	7	25	8
„ 22	45	3	34	2	25	5
„ 29	44	11	34	1	26	3
Average for April	44	11	33	10	25	8
May 6	45	2	34	4	26	4
„ 13	45	1	34	–	27	6
„ 20	44	11	35	5	26	5
„ 27	45	3	32	10	26	1
Average for May	45	1	34	1	26	7
June 3	46	4	32	7	28	–
„ 10	47	4	32	10	27	5
„ 17	47	11	34	–	28	3
„ 24	48	4	32	10	28	11
Average for June	47	5	32	11	28	1
Average for the quarter	45	9	33	7	26	9

BANK OF ENGLAND.—WEEKLY RETURN.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), for Wednesday in each Week, during the SECOND QUARTER *(April—June) of* 1876.

[0,000's omitted.]

1	2	3	4	5	6	7
ISSUE DEPARTMENT.					COLLATERAL COLUMNS.	
Liabilities.		Assets.				
Notes Issued.	DATES. (Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.	Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.
£ Mlns.	1876.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1876. Per cnt.
39,46	April 5	11,02	3,98	24,47	27,47	6 April 3
39,62	,, 12	11,02	3,98	24,62	27,72	
40,04	,, 19	11,02	3,98	25,04	27,45	20 ,, 2
40,31	,, 26	11,02	3,98	25,31	27,46	
40,49	May 3	11,02	3,98	25,49	28,22	
40,50	,, 10	11,02	3,98	25,50	27,96	
40,77	,, 17	11,02	3,98	25,77	27,88	
41,24	,, 24	11,02	3,98	26,24	27,36	
41,53	,, 31	11,02	3,98	26,53	27,78	
41,79	June 7	11,02	3,98	26,79	27,78	
42,51	,, 14	11,02	3,98	27,51	27,20	
43,47	,, 21	11,02	3,98	28,47	27,01	
44,06	,, 28	11,02	3,98	29,06	27,66	

BANKING DEPARTMENT.

8	9	10	11	12	13	14	15	16	17	18
Liabilities.						Assets.				
Capital and Rest.		Deposits.				Securities.		Reserve.		
Capital.	Rest.	Public.	Private.	Seven Day and other Bills.	DATES. (Wdnsdys.)	Govern-ment.	Other.	Notes.	Gold and Silver Coin.	Totals of Liabilities and Assets.
£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1876.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
14,55	3,11	7,61	20,63	,33	April 5	14,55	18,70	11,99	,99	46,23
14,55	3,12	4,83	22,30	,36	,, 12	14,55	17,82	11,90	,83	45,16
14,55	3,12	4,96	22,68	,30	,, 19	14,55	17,69	12,59	,81	45,63
14,55	3,13	5,56	22,48	,28	,, 26	14,55	17,70	12,85	,95	46,04
14,55	3,12	5,90	21,61	,33	May 3	14,55	18,81	12,27	,89	45,52
14,55	3,12	7,66	20,23	,32	,, 10	14,55	17,97	12,54	,83	45,88
14,55	3,12	7,17	20,27	,31	,, 17	14,55	17,22	12,89	,79	45,43
14,55	3,12	7,64	20,61	,29	,, 24	14,55	16,96	13,88	,85	46,22
14,55	3,09	7,76	20,81	,26	,, 31	14,58	17,08	13,75	1,07	46,47
14,55	3,08	8,97	20,05	,28	June 7	14,58	17,48	14,01	,86	46,93
14,55	3,08	8,56	21,40	,31	,, 14	14,59	17,00	15,31	,98	47,89
14,55	3,08	8,53	22,52	,29	,, 21	14,61	16,90	16,46	1,01	48,99
14,55	3,09	9,07	22,07	,25	,, 28	14,61	17,12	16,40	,90	49,03

LONDON CLEARING; CIRCULATION, PRIVATE AND PROVINCIAL.

The London Clearing, and the Average Amount of Promissory Notes in Circulation in England *and* Wales *on Saturday in each Week during the* Second Quarter *(April—June) of* 1876; *and in* Scotland *and* Ireland, *at the Three Dates, as under.*

[0,000's omitted.]

England and Wales.					Scotland.				Ireland.		
Dates. *Saturday.*	*London:* Cleared in each Week ended *Wednesday.**	Private Banks. (Fixed Issues, 3,81).	Joint Stock Banks. (Fixed Issues, 2,65).	Total. (Fixed Issues, 6,46).	Weeks ended	£5 and upwards.	Under £5.	Total. (Fixed Issues, 2,76).	£5 and upwards.	Under £5.	Total. (Fixed Issues, 6,35).
1876.	£	£	£	£	1876.	£	£	£	£	£	£
April 1	126,57	2,46	2,36	4,82							
„ 8	108,83	2,54	2,40	4,92							
„ 15	79,84	2,53	2,37	4,91	April 15	1,88	3,74	5,62	4,21	3,38	7,59
„ 22	81,18	2,54	2,40	4,94							
„ 29	110,58	2,53	2,40	4,93							
May 6	95,31	2,54	2,40	4,93							
„ 13	105,27	2,54	2,36	4,89	May 13	2,13	3,91	6,04	4,36	3,33	7,69
„ 20	84,78	2,53	2,33	4,85							
„ 27	92,71	2,46	2,27	4,74							
June 3	80,32	2,42	2,25	4,68							
„ 10	79,42	2,39	2,22	4,61	June 10	2,49	4,28	6,77	4,13	3,24	7,37
„ 17	95,06	2,39	2,18	4,54							
„ 24	73,43	2,39	2,18	4,52							

* The Wednesdays *preceding* the Saturdays.

FOREIGN EXCHANGES.—*Quotations as under,* London *on Paris, Hamburg and Calcutta;—and New York, Calcutta, Hong Kong and Sydney, on* London.

1	2	3	4	5	6	7	8	9
				Calcutta.				
Dates.	London on Paris. 3 m.d.	London on Hamburg. 3 m.d.	New York. 60 d. s.	Indian Council Drafts.* On demand.	Calcutta on London Credit Bills. 6 m. s.	Hong Kong. 6 m. d.	Sydney. 30 d. s.	Standard *Silver* in bars in London. pr. oz.
1876.			per. cnt.	*d.*	*d.*	*d.*	per cnt.	*d.*
April 7	25·47½	20·70	4·87½	No allotment	21⅛	46⅛	—	53⅜
„ 21	25·50	20·66	4·87¾	20⅞	21¼	47	—	54
May 5	25·40	20·57	4·87½	20¾	21⅛	46½	—	53⅝
„ 19	25·45	20·63	4·87½	20⅜	20⅝	46⅝	¾pm. ¼dis	53
June 2	25·42½	20·68	4·87½	20	20½	47¼	—	52
„ 16	25·47½	20·68	4·87	19½	20⅜	47	—	51$\frac{13}{16}$

* In the first three cases the India Council issued their drafts, or received tenders for them, two or three days previous to the dates in column 1, but in the two last instances the allotments were made on 7th and 21st June respectively.—[Ed.]

ADDITIONS TO THE LIBRARY DURING THE QUARTER ENDED 30TH SEPTEMBER, 1876.

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Supplemento alla Meteorologia Italiana, Anno 1875. Fascicoli iii & iv. 130 pp. 60 pp., plates, 8vo. Roma	Il Ministro di Agricoltura, etc., Roma
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South Australia. Wheat Statistics, 1875-76. Sheets. 3 copies	Chief Secretary, Adelaide
Report from the Select Committee on Depreciation of Silver, with the Proceedings of the Committee. No. 338	The India Office
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Vol. XXXIX.] [Part IV.

JOURNAL OF THE STATISTICAL SOCIETY,

DECEMBER, 1876.

The Opening Address *of* James Heywood, Esq., M.A., F.R.S., President *of the* Statistical Society, *delivered on* Tuesday, *the* 21*st November*, 1876.

During the present year the Statistical Society has to record the loss of several eminent foreign Members, the best known of whom was M. Wolowski, son of a former President of the Polish Diet. The young Pole received his education in France, and returned for a time to his native country, taking a part in the Polish revolution of 1830. After the failure of that movement, Wolowski became naturalised in France, and devoted his attention to economic and financial subjects. He founded the French Review of legislation and jurisprudence, gave lectures in the "Conservatoire" of arts and trades on industrial legislation, was elected a Member of the French Institute, and represented the Department of the Seine in the French Assembly. Among his numerous publications, the translation of a remarkable treatise may be mentioned, the original of which had been written in 1526, by Nicholas Copernicus, the illustrious astronomer, on the coinage of money.

Copernicus was a canon of Frauenburg, which was connected with the chapter of Warmia in Prussia, and Albert of Brandenburgh, Grand Master of the Teutonic Order, had seized the property of this chapter. Prussia in the 16th century formed part of the kingdom of Poland, and Copernicus aided in bringing the complaints of the aggrieved ecclesiastics before King Sigismund. The inhabitants of Prussia suffered from a debasement of the coin, which had been encouraged by Prince Albert of Brandenburgh, and by the towns of Thorn, Elbing and Dantzig. Copernicus knew that the base coin had driven good money out of circulation, and he energetically supported the king of Poland in the reform of this grievance.

His treatise notices that the only parties who had derived a profit from the debasement of the coin were workers in silver and gold, and persons familiar with precious metals. Such individuals chose out the best metallic and most ancient coins, which they melted down in order to sell in alloy the silver of which those pieces of money had been made, and thereby the inexperienced common people parted with their silver, and merely received debased coin. When the ancient small pieces of money had nearly disappeared, the coiners selected the best from the remainder, and only permitted the most debased coins to circulate. An increase of prices followed in corn, household provisions, and the labour of artisans, thereby causing widespread discontent.

Copernicus advised one mint to be established for the whole of Poland, including Prussia; and coins were recommended no longer to bear the names of towns, but of the whole State. He also advocated a new coinage, and the calling in of the debased money.

Such practical views manifest the desire of the Prussian astronomer to promote the welfare of his contemporaries. Copernicus was deservedly popular in his day and generation, and the king of Poland and the canon acted cordially together in their economical plans, which were happily brought into action in 1528.

M. Wolowski took great interest in favour of free trade for France, and wrote on behalf of the commercial treaty between Great Britain and that country. In the Review "des deux Mondes" he contributed articles on the finances of Russia, which were afterwards published separately. He found fault with the ill-regulated issue of Russian paper money, and censured the secrecy which was, some years ago, to a large extent maintained respecting the budget of Russia.

An able work on the statistics of Russia, was written by the late M. de Bouschen, who represented the Russian Statistical Department at the recent Buda Pesth Meeting of the International Statistical Congress, and who had previously been a Russian delegate at several successive meetings of the Congress. His death occurred shortly after the close of the proceedings of the Buda Pesth assembly.

In the circle of the Statistical Society, we have lost eighteen members, among whom I may refer to Earl Stanhope, who had been for several years a member of the Council, and who assisted in the International Statistical Congress, at London in 1860, as the president of the section on the census, and on military and naval statistics. Lord Stanhope was an accomplished French scholar, and was thus enabled to aid in the deliberations, where both French and English were spoken at pleasure by the members present.

At the conclusion of the Congress, a dinner was given at the Crystal Palace, which was presided over by Earl Stanhope, and was attended by many distinguished statists.

With respect to our own country, its metropolis has now become the central money market of the world, a position more important than that to which we have long been accustomed, that Great

Britain was the mistress of the seas. She possesses a control over the means by which fleets and armies are prepared, and she benefits foreign nations in their efforts to increase their own prosperity.

According to the "Economist" of the 11th November, a large quantity of foreign money is kept in London, and the amounts of trade and loans between nations are much increased. It is supposed, observes a writer in that able paper (11th November), that a foreign Government, say the German, has 5,000,000*l.* in London, at a joint stock bank, which will probably lend most of that sum to bill brokers and others, on the deposit of bills or securities. "And "if the German Government ask for its money, the joint stock "bank will call in that money from the bill brokers, and then these "brokers will have to go to the Bank of England. They cannot, in "all likelihood, pay the joint stock bank, except they get an equal "loan elsewhere. The advances of the Bank of England will be "increased by 5,000,000*l.*, and also the balance of the joint stock "bank; but then the joint stock bank will draw out its balance by "a cheque to the German Government, who may take it all away in "bullion."

On the 15th November, the writer on the money market in the "Times" remarks, that during the preceding week "another large "amount of gold left the Bank of England, the total withdrawn on "balance being 972,000*l.* The large sum in bars taken out on the "15th November to the Continent is believed to be for Germany. "The German Government has been selling about half a million "of silver in the London market during the first fortnight in "November, and the inference is, that the proceeds have been thus "invested. Since the highest point in the accumulation of gold "was reached at the Bank, which was on the 20th of September "last, when the total stood at 35 millions, the withdrawals on "balance have amounted to $4\frac{1}{4}$ millions. We shall probably see a "further reduction in the reserve to-morrow, and yet so small is "the general demand for money, so few are the bills offering for "discount, and so reluctant are all engaged in trade to extend their "operations in the present critical state of foreign politics, that "the rates of $1\frac{1}{8}$ to $\frac{1}{4}$ per cent. are barely maintained."

One of the characteristics of the present time is the enormous trade of banks in Great Britain and Ireland. Mr. Dun, in his paper on "Banking" read to this Society, calculates that the total amount of banking liabilities in the United Kingdom, including the capital employed in the business, reaches a grand total of 782,600,000*l.*, and that this amount does not include foreign and colonial banks, whose capital in England, and especially in London, would add many millions to the large total already given.

Mr. Dun informs us that in February, 1874, the intrusion into Cumberland of branches of a Scotch bank directed the attention of the public and of Parliament to the question of the non-legal-tender note issues. In 1875 Mr. Goschen introduced into the House of Commons a Bill, the object of which was to confine the banking operations of the Scotch banks to their own country, under the penalty of losing their privilege of issue in Scotland. This Bill was met at the instance of the Government by the appointment of a Select Committee of the House "to consider and report upon the "restrictions imposed and the privileges conferred by law on "bankers authorised to make and issue notes in England, Scotland, "and Ireland respectively."

On the 22nd July, 1875, the Committee informed the House of Commons, that they had examined a considerable number of witnesses, and had agreed to report the minutes of evidence to the House. No resolutions based on the evidence have been published by the Committee on banks of issue.

An excellent paper on currency and banking was read to the Manchester Statistical Society, on the 24th May, 1876, by Sir Francis Hincks, Ex-Finance Minister of Canada, who observes, that he has "never seen a plausible reason assigned for confining the "1*l.* note issue to Scotland and Ireland."

I have an early recollection at Edinburgh, of the great Scotch demonstration in 1825, in favour of 1*l.* notes, when Sir Walter Scott published a spirited eulogium of that system, under the assumed name of Malachi Malagrowther. At the expiration of half a century, it is now a question, if the advantage which the "canny "Scots" have known so well how to preserve may not, under proper regulations, be extended to South Britain.

Two circumstances illustrative of the condition of this country deserve to be attended to. Mr. Dun remarks, that "on a rough "calculation, 97 per cent. of the money transactions of the nation "are ordinarily effected by cheques, bills, or other expedients of "credit, about 2½ per cent. by bank notes, and about one-half per "cent. by coin."

Dr. Farr, in his admirable paper on the valuation of railways, &c., read before the Statistical Society in May, 1876, thus described the enormous development of the post office of the United Kingdom:—

"The profit of the post office in 1874 was more than 1,000,000*l.*, "in excess of what it had been in 1838. Still, it is not by revenue, "but by its services, that the advantages of the post office are to be "estimated; now, in 1874, it delivered to different addresses "967 million letters, 79 million post cards, 259 million book "packets, at the charge mostly of pence and halfpence, besides "cashing money orders, opening savings banks, granting small "insurances and selling annuities."

Towards the close of the last Parliamentary Session two Bills were withdrawn relating to a considerable reduction of the number of college fellowships at Oxford and Cambridge, the total number of Fellows in both Universities being 709. The Universities in the two ancient English seats of learning are comparatively far less amply provided than the colleges, and the academical authorities of Oxford and Cambridge acquiesce in legislation for augmenting the wealth of the local centres of educational power on the Cam and the Isis.

Whenever the subject of a rearrangement of ancient collegiate property is revived, some consideration should be given to the lines of study spontaneously followed by students in institutions where the Greek and Latin languages do not hold such a wide-spread influence.

During the session of 1875-76, the principal entries of students to arts and science classes in Owens' College, Manchester, may furnish an example of what is now agreeable to public opinion in a great English commercial community.

There were—

220	students in	chemistry.
158	„	pure mathematics.
141	„	Latin.
127	„	French, and
132	„	the English language.

My own feeling is in favour of a university in Manchester being allowed a royal charter with power to confer degrees: I approve of the entrance examination being easy, so as to open wide the access to learning. Three subjects only, arithmetic, English, and the elements of Latin, are absolutely requisite for entrance, and an ample field is before the student, in whatever department he may select for his exertions in Owens' College.

Ladies are coming forward at the present day, with the intention of studying precisely the subjects which are approved at Cambridge, as well as in the University of London, and as their principal college at Girton is situated only three miles from the University of Cambridge, they may have a claim to a portion of the funds to be gradually set apart from a well considered diminution in the number of Cambridge college fellowships.

In the metropolis we are on the eve of a new election of the London School Board. The chairman of that board, Sir Charles Reed, on the 27th September, presented some carefully collected statistics, from which it appeared, that of the children over 7 years of age in the board schools, three quarters are not yet able to read with intelligence a short English paragraph, or to work sums in the addition or subtraction of money. In one district of the metropolis 46 per cent. of the boys over 7 years of age were found not to know their letters.

A superior amount of knowledge has been found in the half time school in Bethnal Green, attended by 414 boys and girls, the bulk of whom are in the first standard. Mr. Williams reports that some of the highest percentages of passes in 1876 have been obtained in the lowest districts of London.

The Board has no free school. All the children pay fees ranging from 1*d.* to 6*d.*, but the divisional committees in each district are empowered to grant immediate provisional payment or remission of school fees in cases of poverty: every such case being submitted to the Board for consideration and approval.

It will be interesting to the Statistical Society to learn that six essays have been sent in to compete for the Howard Medal this year, on the subject of the "Mortality of Hospitals (General and "Special) in the United Kingdom, in Times Past and Present."

Dr. Guy and Dr. Farr were the referees, who report favourably of the essays, and have decided that the highest commendation is due to Dr. Steele, superintendent of Guy's Hospital, to whom the Council have consequently agreed that the prize should be awarded.

Dr. Steele took the M.D. degree at Glasgow in 1848, and in 1861 he contributed to the Statistical Society a numerical analysis of the patients treated in Guy's Hospital from 1854 to 1861; he is also the author of papers on the vital statistics of Guy's Hospital, on hospital dietaries, and on nursing and nursing institutions.

For next year, 1877, a bronze medal and 20*l.* will be given for the best essay "On the Condition and Management—Past and "Present—of the Workhouses and similar Pauper-institutions in "England and Wales, and their effect on the Health, Intelligence, "and Morals of the Inmates." Essays are to be sent in, on or before the 30th June, 1877.

Cards have been sent round to members of the Statistical Society, informing them of the leading subjects of papers to be read at evening meetings during the present session. The total number of the Fellows of the Society keeps up steadily to about 600; presents of statistical works come in from all quarters, among which I am glad to notice an excellent set of volumes on the statistics of Bengal, presented from the India Office, and several statistical books relating to the British colonies, which have been sent to the Society by colonial honorary members of the Society.

The foreign and home departments of the library are both receiving continual additions.

In Paris there is a valuable public institution supported by the State, the "conservatoire" of arts and trades, and lectures are there given on economic subjects. Many eminent scientific persons in this country are desirous that the loan collection of scientific apparatus and of maps and specimens in South Kensington should as far as possible be preserved in London. The Commissioners of the Exhibition of 1851 favour this plan, and are willing to erect a building for the proposed museum.

If such a project should be realised, and should comprehend lectures on a similar plan to those of the Parisian "conservatoire" of arts and trades, the professor of economic science would find ample materials for the preparation of his discourses in the large library of the Statistical Society, and the generous donors of books and tracts would rejoice that their liberal contributions to statistical literature had been duly appreciated.

PRELIMINARY REPORT *of the* NINTH INTERNATIONAL STATISTICAL CONGRESS, *held at* BUDA-PESTH, *from* 1*st to* 7*th September*, 1876. *By* FREDERIC J. MOUAT, M.D., F.R.C.S., *Foreign Secretary, Statistical Society.*

[Read before the Statistical Society, 21st November, 1876.]

WHEN I came to examine carefully the programme of the congress, the daily bulletins issued at Buda-Pesth, and such of the publications submitted to the assembly as I had been able to gather together, I felt doubtful of being able to lay before the first meeting of the Statistical Society of the present session, any such report of the meeting as would convey a correct and connected view of the work done. I had intended, therefore, to postpone my report until all the documents needed, and particularly the *compte rendu* of the conclusions arrived at, were in my possession. It is obviously impossible for any individual to be continuously present in more than one section, and to occasionally assist in the discussions of more than one or two at the utmost. He must of necessity, therefore, depend on the published bulletins and official statements for the materials of his report. These unfortunately are so drawn up as to afford little exact and no detailed information, and the resolutions submitted to the general assembly are entirely absent. I believe I could have given you a tolerably exact account of the proceedings at which I assisted personally, although much of the work done was in a language with which I am imperfectly acquainted, and which was not the official language of the congress; but it does not appear to me to be desirable to separate a part from the whole. Moreover, there are many matters connected with the procedure and working of these congresses, apart from the actual questions discussed, which are deserving of special consideration, and which would, in my opinion, be better considered by themselves, than in connection with the actual daily proceedings and discussions.

I have, therefore, prepared this preliminary report for your consideration, and if it be not what you came prepared and expected to hear, I pray of you to attribute it to no shortcoming of mine, but to circumstances which were beyond my control.

Again, now that the organisation of the congresses is more complete than it has ever been before, and there is a continuity in their labours in which our Statistical Societies can and ought to take a leading part, I do not think that the report of each session can be disposed of in a single brief statement, such as is contained in the excellent summaries prepared by Professor Leone Levi and the late Samuel Brown, which are published in the *Journal* of the Society.

The ninth session of the International Statistical Congress was held at Buda-Pesth, in Hungary, under the honorary presidency of the Archduke Joseph of Austria, grandson of the Emperor Leopold II, and son of the late Archduke Joseph, Palatine of Hungary.

The eighth session, presided over by his Imperial Highness the Grand Duke Constantine, was held at St. Petersburg in 1872, and was marked by the cordial reception given to the delegates from all countries, the magnificent hospitality extended to them, and the large amount of useful work accomplished under the immediate direction of M. Semenow. It likewise inaugurated a new era in the general study and application of statistical methods, by the appointment of a permanent commission to utilise the experience already acquired, to form a connecting link between the successive meetings of the general body, and to assist in the preparation of the programme of each coming reunion of statists from all parts of the world. It will be especially remembered as the last occasion on which the originator of these international gatherings, the late M. Quetelet, appeared.

At the concluding meeting that profound observer, whose intellectual activity was little short of marvellous at his age, expressed in pathetic and prophetic terms his inability to travel so far as the United States of America, one of the countries proposed as the next place of meeting. In addition to the sentiment to which M. Quetelet gave utterance, it was generally felt that a year of jubilee and rejoicing would not be well suited for the calm consideration of questions demanding close reasoning, and as near an approach as can be attained to mathematical accuracy—subjects, indeed, which cannot be too far removed from all such disturbing influences as centennial manifestations. The third country which put in a claim was Switzerland, where statistics are studied with considerable success, and which is always in itself a source of attraction. The selection of the capital of Hungary was, however, finally determined on by the permanent committee at Vienna in 1873, and the meeting would have been held last year but for the postponement of the Geographical Congress and the intervention of the Hungarian elections.

The organising committee at Buda-Pesth had for president the Baron de Simonyi, Minister of Agriculture, Industry, and Commerce, and for vice-presidents the Archbishop of Kalocsa, a Privy Councillor and member of the Chamber of Peers, and M. Charles Keleti, the leading spirit of the committee, and chief of the Royal Bureau of Statistics in Hungary.

The work of the congress was divided into five sections:—1, Theory of statistics and population; 2, Justice; 3, Public health; 4, Agriculture, and sylviculture or forestry; 5, Industry, commerce, transport, and finance.

The organising commission prepared and circulated a general programme of the approaching congress, with detailed statements of the special questions to be submitted to each section. From the introductory sketch we learn how the capital of Hungary came to be selected for the meeting of the ninth congress, and are made acquainted with the steps which led to the formation of the permanent committee. The first meeting of the congress, held at Brussels in 1853, was the model on which its immediate successors were arranged. The official representatives of different Governments, and the learned specialists who cultivated particular branches of statistics, had both a consultative and a deliberative voice in the determination of the problems submitted for solution. The same procedure obtained at Paris in 1855, but at Vienna in 1857 a distinction was drawn for the first time between official and non-official members, as the former were supposed to form a special commission, and in London in 1860 it was determined that the official delegates should be represented in each section.

It was at Berlin, however, in 1863, that the reorganisation of the congress was specially considered, and a definite proposal submitted to establish permanent relations among the members, in the intervals of the meetings of the congress. The object of this was to secure continuity, and to give effect to the labours of the great gatherings and formal triennial assemblies. This proposal was so stoutly combated, that its settlement was adjourned until the question had been carefully considered by an International Committee. It produced an animated discussion in 1867 at Florence, where it was contended that it was wrong in principle, and opposed to the proper object of the institution of the congress, to subject the views and opinions of professional and official statists to a mixed assembly, of which the collective wisdom was not fitted to determine special questions with sufficient exactness. The discussion was again adjourned to the Hague in 1869, when a proposition was submitted to have the decisions of the general assemblies re-examined by the official delegates, assisted by men learned in special branches of statistical research, with a view to fix definitively the exact form in which those decisions should be submitted to the different Governments represented at each congress. The determination of the question was again deferred in consequence of a proposition from Dr. Engel, the chief of the Statistical Department of Prussia, to divide the elaboration of statistical details into twenty-five categories, and to distribute the labour of preparing and digesting these among the different countries interested in such inquiries. The matter was finally settled at St. Petersburg in 1872 by the appointment of a permanent committee selected from the official representatives charged with the conduct of special statistical inquiries, but giving the right to other states not so represented, to put in an appearance when they were prepared to do so.

This committee met at Vienna in 1873, and reduced to rules the usages and customs of the different congresses. Thus statistical inquiries and their results being now placed on a firm and permanent basis, there is some hope of the vast array of figures which are annually collected in all parts of the world being carefully digested, and the conclusions fairly deducible from them being formulated for the purposes of legislation, and the various other important uses which can be made of figures as exponents of facts.

The procedure thus elaborated was excellent and eminently practical in design, but failed in execution at Buda-Pesth. The congress was over-ridden by official delegates, the permanent committee was to too great an extent set aside by the organising commission, the final resolutions of the congress were again submitted to the mixed assembly, from which a thoroughly useless and inconclusive vote was taken; and the rules of procedure in several of the sections were deliberately set aside or ignored.

The Congress has now become a permanent institution, and if it is to continue to exercise a wise and wholesome influence on statistical inquiries generally, and on the harmonising of the statistics of different countries so as to render them useful for international purposes, its procedure cannot be regulated with too great care and exactness.

With the existing organisation, a very slight change of procedure will accomplish all that is required, as I shall endeavour to show in my concluding remarks; and I venture to hope that the permanent commission will direct special attention to the matter, in the interval that must elapse before the assembling of the next congress.

Although then the permanent committee has virtually superseded the organising commission of the country in which the congress is held, the representatives of that country were allowed to have a potential voice in the selection of the special questions for discussion at the general assembly. The organising commission has still, however, important special functions to fulfil, and is charged with all the local and onerous duties associated with the meetings;

hence the issue of the programme by M. Keleti, by whom it was prepared with great skill, ability, and clearness.

It is most desirable, however, that the relations between the permanent and organising commissions should be strictly defined, so as to avoid the difficulty experienced at the first meeting of the official delegates in the capital of Hungary. This was met by the only solution practicable at the time, viz., the somewhat cumbrous expedient of amalgamating the two bodies. Their functions, however, are distinct and of equal importance, they run in parallel lines, and consequently should never meet to come into collision, and if each were to devote its attention exclusively to its own work, the programme would be prepared and promulgated in time for the statists of all countries to master the contents of the very valuable papers on special subjects submitted for consideration, and be better prepared to take an effective part in the deliberations of the congress than they are now able to do. The local arrangements, again, would be made with greater care and precision than is at present practicable, the pleasure and hospitalities would not be allowed to come into injurious competition with the serious work of the congress, and the daily bulletins could be so prepared as to become better records than they now are of the work done from day to day, and more certain guides to that which would remain to be done before the close of the proceedings.

To the permanent commission, as representing all nations, should be assigned exclusively the business of preparing the programme of the coming session in all its details, and their decision should be final, and not subject to revision by a mixed *avant congrès*, which has now little *raison d'être*. This programme should be printed and circulated at least six months before the date fixed for the general assembly, and be made over to the organising commission to carry into effect.

The rules of procedure, languages to be used, and all similar matters should be printed in a concise and intelligible form in at least two languages, and be placed in the hands of each member of the congress on his joining, with an intimation that they would be strictly enforced. A little of this discipline was much needed at Buda-Pesth, where the rules, regarding languages in particular, were constantly violated in an unseemly and not altogether inoffensive manner.

The organising commission must always be a local body, and to it might safely be entrusted all purely local arrangements, for it is impossible to speak too highly of the kindly feeling, warm and generous sympathy, and splendid hospitality which the congress has invariably experienced in its migrations from one great centre of civilisation to another, in the quarter of a century of its existence.

The distribution of the papers, printed at great cost, and many of them of exceptional interest and value, requires also better regulation than now obtains. In the existing scramble, for it is nothing else, those to whom they are of real interest and importance may fail to obtain them, while some persons, not troubled with conscientious scruples, carried off a daily supply, often in duplicate or triplicate, which is rapidly converted into waste paper. This matter would be easily regulated by requiring the authors of all works intended for general distribution, to send them in to the local secretaries, by whom alone they should be made over to the members of the congress, a simple printed form of receipt being furnished by the recipient in each case. I intended to have brought away a complete series of these papers for the library of our Statistical Society, but failed to procure some works, the supply having been prematurely exhausted.

The following list of special subjects for discussion in each of the sections was circulated by the organising committee.

Section I.—Theory and Population: 1, Statistics as a subject of primary, secondary, and higher education; 2, On what basis should exact mortality tables be constructed? 3, In what form should the periodical reports of the movements of the population of large towns be constructed for purposes of comparison?

Section II.—Justice: 1, Judicial returns and reconvictions; 2, Mortgage registers (registries of land) (? Domesday books); 3, Joint stock, industrial, and commercial associations.

Section III.—Medical and Public Health Section: 1, International statistics of epidemic diseases; 2, Statistics of cholera; 3, Statistics of mineral waters and baths.

Section IV.—Agriculture and Sylviculture: 1, Agricultural statistics; 2, Forest statistics; 3, Agricultural meteorology.

Section V.—1, Statistics of home industries; 2, Statistics of deaths and accidents from the nature of particular works, and provisions against such accidents; 3, Statistics of institutions created for the benefit of the labouring classes in connection with great industrial enterprises; 4, What are the best rules for the preparation of balance sheets and tables of external commerce? 5, Statistics of railways and of the movements of the internal commerce of a country; 6, Statistics of the finances of great cities.

The chief objection to this ambitious programme was the impossibility of an exhaustive consideration of the various subjects of inquiry in the time allowed. This, however, is a defect common to all scientific congresses, and it may possess the advantage of bringing many important questions to the front which demand repeated consideration and discussion for their solution, and which it is not desirable, even if it were practicable, to attempt to settle at a single session. Several of the questions discussed at Pesth were legacies of former congresses, and some of them have again been relegated to future meetings.

The fifth section was subsequently divided and formed into two sections, one of industry, the 5th; another the 6th, of commerce and transport.

The printed list of official and non-official delegates and of other persons present at the congress, showed that the German Empire sent 33 members, Austria 42, Belgium 10, Brazil 1, Denmark 4, Egypt 2, Spain 1, Finland 2, France 10, Great Britain 10, Greece 1, Italy 7, Japan 1 (M. Maurice Block), Luxemburg 1, Monaco 1, Norway 1, Holland 2, Portugal 2, Roumania 2, Russia 30, Servia 1, Sweden 8, Switzerland 3, Hungary 270—in all, 435 persons.

From a table printed by Dr. A. Ficker, of Vienna, in his report on this congress, it appears that the following were the numbers present at each of the preceding congresses, viz:—

1853.	Brussels	153
'55.	Paris	311
'57.	Vienna	537
'60.	London	585
'63.	Berlin	477
'67.	Florence	751
'69.	The Hague	488
'72.	St. Petersburg	638

The bulk of the members in every case was, as might be expected, furnished by the locality. Turkey, North America, British India, and the Colonies of Great Britain were not represented in Hungary.

It is, I think, to be regretted that neither the India nor the Colonial Office puts in an appearance at these congresses, for much valuable statistical work is now being done in the great outlying portions of the British Empire, which is little known generally, either at home or abroad. Nothing would tend more to impress the world without with a correct estimate of the true grandeur of the position of Great Britain among nations, and of the vast influence which she exercises over a considerable portion of the habitable globe, than the spreading abroad a knowledge of the exact statistics of the areas, populations, races, nationalities, industry, productive resources, and material wealth which she controls or possesses.

In the average continental mind, and even tolerably high in the social scale of some foreign nations, England is only known as a small, selfish, sea-girt, money-getting nation, purely and intensely commercial in her instincts, and moved by no higher principle than a regard for her material interests. Surely it is worth the while of our statesmen to correct these popular and mischievous errors by the inexpensive process of sending accredited representatives to the great international peace gatherings, where facts and figures are industriously collected and actively distributed by that mighty instrument of modern civilisation, the public press. There is certainly no country represented at the congress which does not possess some record of its proceedings, and in this record, England at present occupies but a small and insignificant place. This need not be, and should not be.

The number and privileges of the official delegates need either restriction or extension. Germany sent no less than 11 such members, Austria 11, Belgium 4, the Brazils 1, Denmark 3, Egypt 2, Spain 1, Finland 1, France 5, Great Britain 2, Greece 1, Italy 2, Luxemburg 1, Monaco 1, Norway 1, Holland 1, Portugal 1, Roumania 1, Russia 16, Servia 1, Sweden 2, and Switzerland 2. This enumeration is sufficient to show how unequally and injuriously such a system must work in the interests of statistical science and research, to which interests alone the highest privileges of the congress should be strictly limited. Either then Sovereign States should alone send accredited agents as official representatives, and those in restricted numbers; or such privileges as are at present attached to the office should be extended to all members of bodies specially devoted to statistical research, which may nominate members to represent them.

The question is one of little personal interest to Englishmen, who are seldom seekers of the cheap rewards represented by ribbons and stars, since many of the best men of the nation are perfectly content to be without them. But, as representatives of science, and as men entitled to take a leading part in all discussions connected with the special work of the congress, it is somewhat ridiculous that England should occupy a position inferior to that of any existing nation, since in all that constitutes real strength and greatness she has no superior. Others may possess larger armies, and waste much of their substance in their maintenance; but in extent of territory, wealth, and liberty, in the widest and best sense of the word, and in the industry, intelligence, and enterprise of her people, she is certainly entitled to a foremost place in the front rank.

On the morning of Wednesday, the 30th of August, the permanent commission met in the academy to give an account of its proceedings, to state by whom the preparatory work of the present congress was to be performed, and to make way for its successor. This being the first occasion on which the permanent commission gave note of its existence, the morning was chiefly devoted to clearing up little points of detail in matters of procedure, for which there were, of necessity, no precedents. The discussion, which was throughout amicable, ended in a sensible compromise by the President, M. Semenow, whose great tact and experience never appeared to better advantage, announcing that "the members of the Perma-" nent Commission, the representatives of the Organising Committee, "and the delegates of all countries, should take part in the "preparatory work of the congress."

In the afternoon of the same day, the president announced as a consequence of the proceedings, and vote of the morning sitting, that the assembly had formed an *Avant Congrès*, of which M. Keleti was appointed president, M. Semenow continuing to assist in the discharge of the duty, as M. Keleti had still much work to get through in connection with local organisation and arrangements.

The first formal business was the regulation of the procedure to be adopted.

The rules which regulated the Congress of St. Petersburg were adopted. The four first articles were accepted, and the fifth alone gave rise to any serious discussion. It declared French and Hungarian to be the languages of the congress, but the use of all other tongues was permitted, with the reservation that every discourse not in French should be translated into that language. "Reports, propositions, conclusions, and the official statements "(*procès-verbaux*) of the sections and of the general assembly shall "be communicated in French."

It was ultimately decided that the *right* to employ any other language than French and Hungarian was conceded, but that as the reporters would only take short-hand notes in French and German, speeches and papers in other languages must be translated into French.

This question of tongues is a serious one as respects the success of future congresses, and the systematic violation of the portion of the rules quoted above, needs to be dealt with in a more stringent manner than obtained at Buda-Pesth.

Why a paper or speech in English should need translation into French, and German discourses should not be subjected to the same process, was not very apparent. In several sections German was the preponderating tongue, and in the concluding proceedings of the general assembly there was a persistent, profuse, and controversial employment of German, which does not admit of excuse or justification.

The question of languages, which constantly crops up on these international occasions, is one of so much future importance in an educational sense as to deserve a few remarks. We are probably much further from an universal tongue than we are from any common measure. Hence, in the rapidly increasing intercourse of different nations, it is extremely desirable that the youth of every country should be so instructed as to take their positions as citizens of the world, with the greatest ease and advantage to themselves. There can be no doubt that the language now spoken and used in ordinary intercourse by the greatest number of educated persons is, in the world as a whole, English. The number of these, again, is so rapidly increasing, that, whether other nations will it or no, English is destined at no distant date to supersede French as the *lingua Franca* of the future. French will always be prized and valued as the most charming medium of polite intercourse, unrivalled in the purity and elegance of its diction, and enshrining a literature which can never die.

German is at present the language of science and research, and also contains a body of literature second to none in depth, extent, and value. But, from her geographical position, Germany can never take the place of the Anglo-Saxon or English-speaking nations. And so the language of commerce, and consequently of the chief intercommunication of the world, will of necessity become the common medium of understanding. Of Italian, the language of music and of song, it is not necessary to speak; nor are Russian or any other of the dialects used by vast bodies of human beings ever likely to extend beyond their own borders.

At the late congress it was manifest that French was the most general bi-lingual qualification possessed by the delegates of different nationalities; and so the French, Belgian, and some of the Swiss delegates possessed an enormous advantage in the discussion of the questions submitted for consideration. But this is an advantage which is felt and resented by some other nations, and will certainly not be long continued to them. The solution suggested by Dr. Farr is likely to meet with general acceptance hereafter, viz., that each delegate should speak in his own mother tongue, for very many educated persons understand other languages without possessing the faculty of speaking freely and fluently in them.

It was, I think, to be regretted that Hungarian was used at all. As a compliment to the locality in which the congress met it was, no doubt, strictly in accordance with precedent, but as every educated Hungarian is master of more languages than his own, there was no need to employ a tongue of necessity restricted on ethnological grounds, and to have foregone the privilege would have spared our gallant and hospitable friends some ungenerous and unfriendly criticisms.

At this meeting it was determined to relegate to the first section the question of the statistics of large cities, and to subdivide the fifth section into two as noted before.

On Thursday, the 31st, the *Avant Congrès* again met, and the order of the day was the actual position of international statistical work.

M. Maurice Block, the delegate of Japan, presented some remarkable examples of statistical work done in Japan, showing how rapidly the influence of western civilisation is spreading among the most ingenious, and in some respects the most original of eastern nations.

A brief *résumé* of the statistics of Sweden and of Roumania; of the administration of civil and criminal justice in different countries; of savings banks; of the movements of the population in thirty-six large cities; of emigration; of vine cultivation; of joint stock societies; of mines and mining industries; of the causes of death, and of health were given. It would obviously be impossible to attempt, in such a condensed report as mine must of necessity be, even the briefest outline of the important and valuable labours of which only a sketch was submitted. The documents in which the facts were embodied were all laid on the table; and I know of no more useful work to engage some of the time and attention of the many statistical societies of Europe, than to examine and analyse those reports in the intervals of the meetings of the congresses, to point out the direction in which they may need amendment, and suggest further inquiry, and to formulate the results already obtained for general use.

It is simply impossible for the preliminary meetings of congresses to discuss and criticise with effect the vast amount of information brought to general notice for the first time; and the permanent commission is scarcely the body to estimate the real value of its own out-come. This is the proper work of the statisticians of all countries, needs the careful and exact examination of the closet, and will in time secure the uniformity in statistical inquiries which is required to make them internationally valuable.

The remainder of the sitting was devoted to explanations of the reasons why the special researches delegated to other countries had not been completed. In my humble judgment there was no need for apology. The work is too great and too important to be done hurriedly or in a given time; and there are too many difficulties in the mere collection of the data from different countries to expect speedy results. Life is short and art is long—"tout vient à qui "sait attendre."

On Friday, the 1st of September, the congress was formally opened in the great hall of the Academy by his Imperial and Royal Highness the Archduke Joseph, who pronounced the following discourse in French:—

"Gentlemen,—Nearly a quarter of a century has elapsed since the first assembly of the International Statistical Congress. The difficulties which, in the beginning, encumbered this institution will not in future be felt, as they no longer need attention. We are rejoiced to think that to Hungary has been assigned the task of adding an additional page to the interesting history of your valuable labours. And so it is with unfeigned pleasure that we welcome among us the honoured members of this International Congress.

"Hungary has only recently been able to cultivate statistics with the ardour needful, for while other nations were prepared to utilise the results to be obtained from the application of statistics, our country had scarcely begun to collect the facts required by that science at the present time. But, feeling the importance of this branch of modern science, she endeavoured, as soon as circumstances permitted, to take up the position to which she aspired, and if she partially realised this desire when she resolutely set to work, it is due to her following the line of inquiry already made, and profiting by the immense mass of material which modern science placed at her disposal—the science, gentlemen, of which you are the worthy representatives.

"Sustained in her efforts by your aid, our nation soon got possession of certain results—the immediate consequence of the cosmopolitan character of your labours, not only in the domain of science, but in that of institutions and social conditions.

"In no other direction has the international character of the labours to which your efforts are directed been better seen, or produced finer fruit, than through the intermediation of statistical congresses.

"If the congress was originally content at its periodic gatherings to endeavour to obtain uniformity as a ground of comparison of ascertained facts, and if, in our time, the certainty of the labours of the congress has been secured by the creation of the permanent commission, all points more and more to the concentration of international researches in a central body.

"And surely it is by no fortuitous coincidence that we see in different countries men who, by no previous interchange of ideas, express a desire to collect and concentrate the facts relating to epidemic diseases, to the more important results of agricultural statistics, or to the statistics of meteorology and commerce. Your programme is sufficient proof of this.

"As science has succeeded in giving a prodigious impulse to commercial enterprise, through its grand discovery of steam and electricity, it needs for itself the co-operation of these two factors for the collection, as well as for the publication and utilisation, of the facts to which it lays claim.

"The important labours of men of science will always be estimated at their true value: society cannot dispense with them. To judge of the importance of the social facts which are the outcome of their labours, we need only to run through the numerous publications which we owe to your ardent pursuit of truth, and to consult the works of that great master of science, Monsieur Quetelet, whom death has removed from our midst, and whose memory we are about to celebrate.

"But what we now are in a position to exact is, that a knowledge of the multiplied statistical labours of many nations, and the results obtained from them should, in the interests of science and of society, be spread abroad with the least possible delay.

"Thus it is that many voices claim the prompt concentration of your deliberations, their rapid abstraction by an authority which, as soon as it has gathered them together, should make them known and publish them, with the works from which they are extracted.

"The debates which are about to begin, will show how far this end will be attained, by the judicious selection of the means to which they appeal.

"But those who know how the manner of evolution affects progress, will not lose faith in the labours which unite the past with the present, and ripen the seed now sown, which may be formulated in these words: international co-operation in scientific aim, and international realisation of the materials furnished by each country.

"The natural characteristic of statistics in our time is eminently practical.

"The past has somewhat unconsciously often derived benefit from statistics; later on, it engaged in its study more carefully and conscientiously; but how limited and circumscribed were its actions! How far are we now removed from the time when men were content to speak of 'remarkable things regarding the State' ('Staatsmerkwürdigkeiten'), whereas now we are actually seeking for a new name to create a novel science in the study of population alone, which until now has only formed a special chapter of statistics.

"And what problems do we fear to attack with the arms of statistics in our hands, and of what immense territories do we not undertake the laborious exploration with the resources which that science places at our disposal.

"Armed with the magnifier and scalpel of science, the statist of our time daily attaches himself more and more to the study of social phenomena, to attempt to wrest from nature her hidden secrets, and to combat the enemies of society. His arms are figures, but with these trenchant weapons he does not hesitate to enter the lists, to do battle with the evils which decimate provinces.

"By dint of toil, having ascertained the extent of agricultural produce, he is prepared to spread abundance in provinces condemned to suffer want. By the solution of meteorological problems, attained by patient industry, do we not see him able, little by little, to avert the dangers which threaten production, or the movements of commerce?

"By publishing the results of fresh statistics, does he not put into our hands the means of ameliorating the climate in which we dwell? In studying the institutions created for the benefit of the industrial classes, and in registering carefully the victims of work, does he not aid materially in bettering the lot of the least favoured classes, and, in this way, in increasing the amount of production.

"In one word, gentlemen, every one of the questions set down for discussion opens up one of the practical sides of your science. And if, by a strange and remarkable anomaly, the services which statistics render to society cannot be expressed in figures, we can yet appreciate at their true value the immense influence it exercises over the whole development of humanity.

"In considering from this point of view the results obtained from statistical labours, we cannot withhold a genuine feeling of admiration for the science which promises such a brilliant future.

"Such is our feeling in welcoming you to the capital of Hungary; and in communicating to you especially the desire of His Majesty, our August Sovereign, for the success of your efforts, I declare the ninth session of the International Statistical Congress to be opened."

M. Semenow, the president of the permanent commission, returned thanks in courtly and appropriate terms for the honour conferred for the second time on the banks of the Danube and on the representatives of statistics by the House of Hapsburg, and expressed a hope that under the care of the Hungarian organising committee the congress would make fresh progress in the science whose object is the study of human society, and that they will thus strengthen the bonds which bind the nations of Europe together, and which tend to their better knowledge of each other.

Upon the departure of the Archduke, the chair was taken by M. Trefort, the Minister of Public Instruction, in temporary charge of the Ministry of Agriculture, Industry, and Commerce.

The regulations of the congress were formally adopted, the list of official delegates was read, and the definitive bureau appointed.

M. Trefort remained as president, M. Keleti was appointed principal vice-president, and a host of vice-presidents were nominated, of whom the only representative of Great Britain was our esteemed colleague Dr. Farr—another result of the abuse of the system of official delegates. Secretaries were duly selected, and after some formal business, eulogies were pronounced on MM. Quetelet, David, and Samuel Brown, who had all passed away since the last meeting of the congress.

That on M. Quetelet was a learned and elaborate review of the life and works of that distinguished statist by Dr. Engel, partly in French and in part in German. Printed discourses are out of place on such occasions, and it would have been better had so eminent and learned a statist as Dr. Engel given a brief outline of it orally, the more especially as it was subsequently circulated in type.

In the afternoon sitting, eulogistic discourses were pronounced on Dr. Schwabe, M. Edouard Hun, MM. Charles Dupin and Wolowsky, and the Grand Duchess Helena of Russia, to whom the Congress of St. Petersburg was so much indebted.

The sections were constituted, and set to work seriously on the morning of Monday, the 2nd of September; and here I am afraid that my continuous narrative of the proceedings of the congress must for the present cease, as the daily bulletins do not enable me to give even an outline of the discussions which took place in the various sections.

Those at which I was present myself, viz., the first and third sections, were the scene of animated and instructive debates, and in other sections equally useful and important work was done. I have applied more than once to M. Keleti to obtain an official account of the resolutions finally adopted, but as I have not received it I presume there has not been time to draw it up.* It is as well perhaps to postpone a critical examination of the labours of this congress until its *compte rendu* is complete, for it requires to be done with much care and consideration. I purpose, therefore, with the permission of the Society, to defer this very necessary work to a future occasion, when I am in full possession of the necessary materials, and can command the leisure needed for their study and analysis.

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* Since this was written M. Keleti has intimated that it will be ready in a few weeks.—F. J. M.

Among the features of primary interest connected with the Congress of Buda-Pesth, were the graphic exhibition and several interesting and valuable reports on special branches of international statistics—the outcome of the permanent commission.

The former was the direct result of a desire expressed at the St. Petersburg Congress, where graphic methods were discussed, that "considering generally the necessity of perfecting a graphic "study and expression of statistics, the congress expresses a hope "that at every future meeting there will be an exhibition of charts "and statistical tables."

Although the collection brought together in answer to this appeal was not as complete as could be desired, it was by no means a discreditable commencement of a most useful work. It is chiefly by graphic methods of illustration that a knowledge of statistics can be popularised; too much pains cannot, therefore, be bestowed upon this important instrument of education.

Our Statistical Society furnished an interesting collection. Denmark, Russia, Finland, Austria, Hungary, the German Empire, Prussia, Bavaria, Wurtemburg, Saxony, Hesse, Baden, Oldenburg, Hamburg, Belgium, France, Portugal, Italy, Servia, and Switzerland all supplied their respective quotas. The most complete series was that of Austria. A valuable report on the Exhibition was furnished by a special sub-committee, of which I have not the text, but as the reporters were men eminently fitted for their task, I have no doubt that it will be found worthy of a place in the Miscellanea of a future number of our *Journal*.

I have not, for obvious reasons—time and space forbidding—attempted an analysis of any of the valuable and interesting papers and reports submitted to the congress. Some are contained in the programme, and others were subsequently submitted by their authors to the congress. Many of them are contributions of abiding interest, and permanent value to statistical science. Hence I will endeavour, should I be able to obtain a complete series, to prepare a *catalogue raisonnée* of them for publication in our *Journal*, and I hope they will be hereafter available for study on the shelves of our library.

It would be wrong, in any account of the last congress, to omit all mention of the hospitalities and other marks of cordial welcome afforded to the strangers, many of whom went so far to take part in its deliberations. The balls, banquets, excursions, receptions, and other entertainments were organised on a princely scale, and had but one defect, if it be permissible to use such a term in relation to arrangements which were perfect in themselves. They were, if possible, too numerous, and too great a strain upon the mental and physical capacities of those engaged in the serious work of the congress. To no one were the foreign members more indebted than to the Archduke Joseph for his amiability and unfailing courtesy on all occasions. To the municipality of Buda-Pesth, the organising committee, and indeed to all with whom we came into personal contact our warmest thanks are due, and I am sure that I speak the sentiments of every member of the English deputation, when I say that we shall entertain a lively and affectionate remembrance of our visit to the capital of Hungary, and its kindly, manly, generous, and hospitable inhabitants.

From some incidental remarks you will have gathered that I consider the procedure of these congresses to be susceptible of amendment in some important particulars. I deem it to be the duty of all who attend them, and in particular of the members of this, one of the most numerous, influential, and efficient statistical societies in existence, to contribute as far as lies in their power, to endeavour to amend whatever they may deem to be faulty in the working of a body, which may be the instrument of much good if rightly directed; but, which may fail altogether of its purpose, if it is permitted to become the medium of national pretensions, jealousies, antipathies, and the like. The battle fields of peace, unlike those of war, should be friendly contentions in search of truth, and not gladiatorial exhibitions of self-will.

Now that a permanent commission has been arranged, and is in full operation, and the experience of nine gatherings of the most eminent statists of all countries has encountered, and attempted to deal with the great practical difficulties inseparable from the collection of international statistics, the time appears to me to be most appropriate to consider whether the cause may not be better and more speedily advanced by a better regulation of the procedure of the congress itself. It is abundantly manifest that the real strength of the institution consists in the materials prepared for its consideration, and not in the brief and necessarily superficial discussions to which they can be submitted, in the few hours which can be assigned to such purposes during the meetings of the congress.

I venture, therefore, to suggest for the consideration of the permanent commission, the following propositions :—

1. The programme of each congress shall be proposed by the Organising Committee, in consultation with the leading statistical authorities of the place selected for the ensuing

meeting. This programme, when finally settled, shall be printed and circulated to all statisticians and statistical bodies likely to take part in the congress, at least six months before the appointed time of meeting.

No change shall afterwards be permitted in the subjects selected for discussion, or in the sections into which they shall be divided for consideration.

2. All purely local arrangements for the congress shall be made by the Organising Committee, to whom shall be entrusted the duty of giving effect to the programme already settled. The president and secretaries of the permanent commission shall be *ex-officio* members of the organising committee.
3. All papers, discourses, and other documents intended for submission to the congress and for general distribution, shall be made over to the local secretaries, who shall be charged with their distribution, and shall prepare a printed form of receipt for signature by each person to whom the said papers are made over.
4. Official delegates shall consist of all statists accredited by their respective Governments, and of such members of statistical and other known societies, as may appoint them to be their representatives. The latter shall enjoy all the rights and privileges now accorded to the former.
5. Previous to the assembly of the sections each day, a discourse on some branch of international statistics shall be furnished by some eminent statistician, selected by the permanent commission. This discourse shall be written in the official language of the congress, and shall be printed for general distribution, in the same manner as now obtains in the British Association for the Advancement of Science.
6. The rules regarding the languages to be used, the length of speeches, and similar matters, shall be strictly enforced by the presidents of sections.
7. All notices of deceased members shall be pronounced orally, and shall be in the official language of the congress. This shall not prevent the distribution of written memoirs, should such be prepared by any member of the congress. These memoirs may be in any of the leading European languages preferred by the writer.
8. The reports to the general assembly of the results of the deliberations of the sections, shall be strictly confined to the resolutions adopted by those sections after discussion, and shall be in the official language of the congress.
9. The *procès verbal* of these resolutions shall be prepared

and, after being reported to the general assembly, be published at once by the Secretaries of the Congress for general distribution, in the same manner as the daily bulletins. These resolutions shall not be discussed by, nor submitted for the votes of, the general assembly.

10. At the conclusion of the congress they shall be dealt with by the permanent commission, in such manner as the members of that commission may deem to be best fitted to advance the cause of statistical science and research in their international relations.

These are the suggestions which I venture, with all deference, to offer for the consideration of the permanent commission.

Many persons doubt the usefulness of these international congresses, consider that academies and scientific societies are the only really successful cultivators of science, that the time for nomadic gatherings for purposes of research and inquiry has passed away; that special journals are the soundest propagators of scientific truth; in short, that international congresses are merely fairs of intellectual products, in which the best wares are not exhibited, and inferior articles are displayed, which no strictly scientific body will accept or adopt.

On the other hand, our late lamented friend and colleague, Mr. Samuel Brown, whose place as reporter I regret to fill to-day, has more than once expressed a high opinion of the value and usefulness of these statistical congresses in particular. There were few more cautious, careful, and strictly inductive reasoners than he was. The pursuits to which his eminently useful, modest, unobtrusive life was devoted, were singularly adapted to produce a calm, philosophic spirit, from which all rash judgments and hasty conclusions were carefully banished, and in which enthusiasm was always tempered with judgment, and reason had undivided sway. In his last public utterance on the subject, writing of the Congress at St. Petersburg, he said:

> "Every meeting of the International Statistical Congress appears to have a new and increasing interest. It cannot be denied that, since the first of these congresses, which was held in Brussels in 1853, a considerable improvement has been effected, not merely in the methods of statistical research, but in giving to the inquiries in every branch such a scientific character, as greatly to enhance the value of the observations collected. What was wanted, above all things, was uniformity. Hundreds, we might say thousands, of volumes—collected and printed at great expense by the different Governments, by societies, or by individuals—were rendered almost useless, in an international point of view, for want of some uniform method of classifying and showing the results. It was impossible to make comparisons, and so to educe the laws of probability of occurrence of large classes of events in social or political economy. Yet, without the discovery

of these laws, the social, moral, and intellectual condition of a people cannot with any certainty be traced. Every one who has occasion to consult our own Government 'blue books,' and similar publications in other countries, will observe that this desired uniformity is gradually being introduced. We cannot but attribute a great part of this happy result to the labours of the eminent official and scientific men who have brought their theoretical knowledge and practical experience to bear on the discussion of the numerous and important questions which have been debated at these meetings."

It would be difficult to produce stronger testimony than that of him who "being dead still speaketh" words of weight and wisdom.

The statistical congresses have also another influence not less valuable, which has nowhere been formulated with more elegance and precision than in the words of the Grand Duke Constantine, in closing the Congress of 1872.

"Congresses similar to that of which we this day close the sittings, constitute one of the most characteristic and enlightened traits of the age. Men of knowledge and experience, men of diverse views in the sphere of practical life, coming from the far ends of the civilised world to foregather on the neutral territory of science, unite in mutual esteem: they bear the esteem of the individuals to the nations of whom they are the representatives, and this contributes to strengthen the bonds of mutual esteem between the people themselves. In gathering from this sentiment a new force, and so to say in this relaxation from the toil of their daily life, men of science contribute to the propagation of exact knowledge, and still further accomplish the aim and object of their labours, the search after truth and the progress of humanity."

In fact, all that tends to dispel error, to introduce light, to explain the complex relations of modern society, to cultivate good will among nations, to enable each to profit by the experience of others, to teach us all what to do and what to avoid in our national and international relations, cannot but be good in itself, even if it fall short of advancing science by any of those great discoveries which shed lustre on the individual and the nation to whose happy lot they fall.

We, as a people, have no reason to be ashamed of the position we occupy in all these respects. To whomsoever the original discovery of the scientific truths on which they are based may be due, we can at all events claim in their extended practical applications, to have given to the whole world, in the time of men still living, the steam-engine, the telegraph, and the cheap communication which have tended more than all other scientific discoveries combined, to unite mankind in one great family, and to bring the ends of the earth together.

These great civilisers are still in their infancy, and yet how mighty have they already proved in their chastening influence.

To no branch of human inquiry will their further progress be more indebted than to the science which we cultivate. By gathering together carefully the facts, and deducing from them the laws which regulate the great problems of the life with which they are intimately associated, we shall surely, safely, and probably speedily, pave the way to their further extension, and so promote human happiness and progress in the highest degree.

There need be no fear of the future of statistics, if they are pursued in the spirit of Pascal and Quetelet, the first and last of their great propagators—who have passed away. I myself entertain no doubt that by means of international statistical congresses, properly directed, wisely controlled, and harmoniously worked, the links which bind together in one chain all sciences will be gradually forged, and further prove, if further proof be required, the wisdom of the Divine Creator in the government of the world entrusted to man.

ADDRESS *of the* PRESIDENT *of the* ECONOMIC SCIENCE *and* STATISTICAL SECTION *of the* BRITISH ASSOCIATION *for the* ADVANCEMENT *of* SCIENCE, *at the* FORTY-SIXTH MEETING, *held at* GLASGOW, *September*, 1876. *By* SIR GEORGE CAMPBELL, K.C.S.I., M.P., D.C.L.

I FEEL a difficulty in undertaking the Presidency of this special and important department of the British Association, in this great city, which contains so many men masters of so many branches of economic subjects. But, Scotchman as I am, I have felt that I could not decline the honour proposed to me in the commercial capital of my own country; and I remember with pride that perhaps in no place in the British Empire could economic subjects be discussed with so great advantage. Other places have special industries. Glasgow has many, and she excels in them all.

I understand it to be the object of the Association that in the treatment of the subjects presented to us we should study, in this as in other departments, to follow as far as may be a strictly scientific method of inquiry, not lapsing into the discussion of political details, but attempting to ascertain the principles on which economic results are founded, and to define the main lines of economic truth. It may not always be possible to draw the boundary between science and practice; but I am sure that we shall all try as much as possible to avoid matters which involve party or personal questions, and to maintain a calm and scientific attitude in our treatment of the many subjects which come within the range of this section.

The section was originally called that of "Statistics;" and all economic inquiry must be based on or tested by statistics. At first sight statistics expressed in figures might seem to constitute the most exact of sciences; but in practice it is far otherwise. In nothing is so great caution necessary; there is too great temptation to reduce to figures facts which are themselves not sufficiently ascertained; too often an exactness is claimed for these figured results which is altogether fallacious and misleading. In fact there is a use and an abuse of figures; and one is sometimes tempted to sympathise with the cynical philosopher who said that nothing is more misleading than facts, except figures. It is especially necessary to distinguish between figures which are really ascertained, and those which are merely drawn by deductions from rough and conjectural facts. A false appearance of exactness should not be given to these latter. For instance, if we take the geographical area of a country to be so much, and assume the density of population to be at a certain rate per square mile, we may work out a very precise figure, and yet in reality the result is not at all precise.

There is very often fear that statistics are sought out and adapted to suit a preconceived theory. Another misuse of statistics is this, that when they are used to test certain capacities and qualifications, work is directed and shaped to meet the statistical test, and the results thus obtained become misleading. In such a case it is necessary very frequently to change the form in which the statistical test is applied.

Bearing in mind, however, the necessity of guarding against abuse, there can be little doubt that statistical science is one of the most important instruments and necessities of our time, especially in this country, in which we are somewhat deficient in that science. First, we require statistics for the direct ascertainment of facts for practical use; for instance, the statistics of production. Agricultural and manufacturing statistics are of the greatest practical importance to the farmer and the manufacturer. We are almost wholly destitute of agricultural statistics. How great is the contrast in America and other countries, where great attention is paid to these subjects, and every farmer in the country is kept informed of very much that it is most important for him to know!

But there is a second and almost more important use of statistics, viz., the cultivation of economic science by the inductive method. It is by collecting, verifying, and classifying facts that we are able to approach economic truth. There was a time when it seems to have been supposed that political economy was a science regulated by natural laws so fixed that safe results could be attained by deductive reasoning. But since it has become apparent that men do not in fact invariably follow the laws of money-making pure and simple, that economic action is affected by moral causes which cannot be exactly measured, it becomes more and more evident that we cannot safely trust to a chain of deduction, we must test every step by an accurate observation of facts, and induction from them. This is, it seems to me, the highest function of statistical science: we recognise that men are not mere machines whose course may be set and whose progress may be calculated by a simple formula. Men are complicated beings, whose minds and motives of action we do not yet thoroughly understand; we cannot foretel what they will do till we are sure that we know what in fact they actually have done and do in a great variety of circumstances. In proportion as we attain that knowledge, we become acquainted with the main agent in economic science, and make advances towards a knowledge of that science.

When we seek to understand economic history and economic institutions, it is seldom that all the necessary materials are ready to hand in our own country and our own age. We must search for them far and wide. We seek to recover economic history, generally very imperfectly recorded in times when the science was little understood. And at the same time there is a kind of contemporaneous history of which very much use may be made. We may observe facts, and may obtain statistics in countries which are in stages of human and economic history very different from our own. As the history of plants and animals is recovered from geological records, so we may recover much of human history by studying man in the early, middle, and more advanced stages of civilisation. We of this country, who rule over so many lands in so many parts of the world, have special opportunities for this kind of economic study. In my own experience I have been particularly struck by the light thrown on our institutions by a comparison with those lately and now existing among the different peoples of India. India is in truth a country of many peoples, and there is there infinite material for the human archæologist who would study the earlier phases of human history among the primitive aboriginal tribes, still in what I would call the earlier stages of existence. We may there learn much of the origin of the institutions which we have long come to look on as almost part of our nature—of the earlier forms of property and marriage, and many other things. The fortunate connexion with India of that great scholar, Sir Henry Maine, has led to a great amount of light on the connexion between the East and the West. At present I would only allude to one or two points in what I call the middle history of man, directly leading to our modern institutions, in respect of which I think that much may be learned from observation in India. And in India we are not now left to mere individual observation only. A very substantial commencement has been made towards the introduction of statistical science and the collection of statistics of tolerable value, in that country. For some years past great attention has been paid to this subject by the Government. I may venture to say that I myself, when I held office in that country, have done all that was in my power to promote statistical knowledge; and a number of earnest men have done the like. As usual in the commencement of such inquiries, our difficulty has not so much been to get figures as to keep our statistical figures down to those which are pretty reliable. We are thoroughly aware of the necessity of caution in this respect; and we believe that we are gradually coming to the point when we can say that we have some very valuable statistics on a very large scale.

Of the history and use of local institutions we may learn very much in India. That country was, locally speaking, one of the most self-governed countries in the world, in native times. In all parts of this island, while the civic constitutions of the ancient burghs have been preserved, the self-governing institutions of the country at large have almost entirely disappeared, leaving only a few fossil remains to testify to their previous existence. On the continent of Europe the old communes retain a good deal of vitality. But it is in India under native rule that we see these institutions in full vigour and working order. That little republic, the village community of India, has come to be looked on as an interesting old relic rather than as the subject for modern imitation. In my opinion we may draw from it a very large store of economic knowledge which may be very useful to us. I grieve to say that philistine and self-satisfied as we are, prone as we are to believe that there can be no good thing that is not our own, instead of supporting and cherishing the self-governing Indian communes, and taking from them an example for our own country, we are permitting them to fall into decay. They owed in fact their cohesion and their durability to pressure from without, to the necessity of the case, which made self-government indispensable to their existence. Our strong arm has removed that external pressure; and in our self-confident spirit we have substituted our pretentious but imperfect and uncertain courts for the rough but reliable village rule of former days. I believe that the more we introduce into India true economic science, the more it will be apparent that we have taken on ourselves too heavy a burden, that too great centralisation is a mistake, and that, in a country where political freedom on a large scale is impossible, the only satisfactory resource is a large measure of the local government to which the people are accustomed.

The tenure of land is another subject on which great light is thrown by Indian experience. After an intimate acquaintance with the tenures which we there find in existence, and those which our system has created, we seem to have before us a picture of the rise and progress of property in land. Putting aside the older forms of property, we have had in India many examples of the feudal tenure of a conquered country by chiefs and sub-chiefs holding in subordination one to another and ruling over communities of cultivators, some of whom were free and possessed of certain rights and privileges, and others were in a servile position. Among the communities holding land we have manifest traces of the old system of partition and repartition; we have before our eyes the gradual disuse of that old system and the gradual growth of the individual tenure of the lands under the plough with common use of the pasture-lands, the wood, and the water, on a tenure strictly analogous to that of

English commons. We have the struggles between the Lords and the Commoners, and questions between the Commoners and the landless members of the community, just as we have had in this country. Then we have the growth of English ideas of property in land. We have the overlord, the zemindar, no longer holding in feudal tenure and receiving customary dues and services, but turned by us into a rent-receiver. We have the struggle of the rent-receiver influenced by our ideas to turn the privileged cultivator into a tenant pure and simple, to appropriate the commons and to establish absolute property. We have the emancipation of some cultivators as copyholders, the subsidence of others put into rack-rented tenants-at-will, and then into labourers. All these stages in the tenure of land we have in the Indian countries where the zemindar system has prevailed. In other parts of India, where the Government has recognised the rights of and dealt with the ryots direct, we have the rapid development of small property in land with all the incidents of that form of property with which in many parts of Europe we are familiar.

Then we have another process going on in all properties, small and great. At first the holders of the land are content to pay, as they always have paid to native rulers, the bulk of the rent to the State or to the feudal lord, retaining for themselves only certain dues and perquisites. Under our system the State rent is limited; a portion of it is surrendered to the landholders. From time to time, under the influence of English ideas, that portion left to the holder of the land is increased. In one great province the assessment rendered perpetual in the last century has become so light as to be rather a moderate land tax than a rent. In other provinces a moderate assessment fixed for a very long period becomes a very light assessment before the end of that period; as the country progresses and values increase, the share of the landholder becomes larger every day; he learns to spend that share. When the time for revision of assessment comes he resists any very large or sudden increase; and the Government more and more yields to his demands. Thus gradually property in land in the English sense is established. Tenancy by capitalist farmers under capitalist landlords we have not yet come to in India.

The subject of small cultivation seems to derive a new interest in a new quarter from what is now taking place in regard to the emancipated Africans in the United States of America and elsewhere. I understand that the cultivation which has already made the produce of the American cotton districts almost or quite equal to that before the war, is for the most the cultivation of small independent negro cultivators, who raise cotton on a system much the same as that under which the ryots of India or metayers of Italy cultivate small farms. There seems to be among the dark races of India and Africa a dislike to regular hired labour, and a preference for independent labour on their own account, which makes them prefer small farming to service, or at all events leads to their doing better work on their own farms. There has been, I think, a disposition to undervalue the agricultural skill of the Indian ryot. And if it should prove that in advanced America, under free institutions, the cultivation of an article of great value and high quality is best carried on by small black farmers, we may well believe that in other countries, too, great results may be obtained by the same system. The settling down to honest labour of the American freedmen is an example full of promise, I hope, for the African race throughout the world. If in all the countries where the state of black freedmen is still uncertain they can be thus settled, a great end will be achieved. And in Africa itself we may hope that in countries now torn by war and slavery a guiding hand may lead the African race to peaceful, prosperous, and happy times.

I merely instance these as cases in which economic problems may be studied in their several stages in countries other than our own. I cannot attempt to pursue these subjects at present.

Proceeding to another branch of economical science, I cannot but think that there has been passing before us of late a very great deal to bring home a view with which I have before on other occasions dealt—that curtly expressed in the homely saying of Walter Scott, that "it is saving rather than getting that is the mother of riches." What an extraordinary economic lesson is read to us in the results of the late French war! True, the French have been politically humbled; true, they have been obliged to pay a war indemnity of crushing magnitude. But what has followed? Misfortune has taught the French a lesson of economy and prudence; triumph taught the Germans a lesson of pride and extravagance. The French have retrieved their losses; they are at this moment commercially the most prosperous people in Europe; they bear without difficulty or distress a taxation far larger than that of any other country in the world; while the Germans, who launched out into extravagance on the strength of the vast sums paid them by the French, are suffering greatly from exhaustion and commercial collapse; their trade is bad, their manufactures are discredited, their people are disheartened. The French are a people of small proprietors and small capitalists; they have not the great masses of accumulated wealth that we have in this country in the hands of great capitalists. But their wealth is more generally distributed among the people, and in their hands it fructifies at least as much in the end; if there are not such high profits, there are not such great spendings. Looking to their capacity of bearing taxation, to the general wellbeing of the people, to the very general possession of small property, it may well be a question whether, after all and in spite of wars and misfortunes, France is not quite as prosperous a country as our own, and quite as happy a country.

This at least is certain, that small people working for themselves, if they do not earn more, at least work more zealously and save more than those who work as the hired labourers of others. I am inclined to think that, treating the matter scientifically, the facts will justify us in reducing it to a law that the small man who works for himself is a thrifty man and saves, while the hired labourer is seldom so saving and prudent. Why is this? I think the explanation is to be found in the habit of forethought and management which is necessarily engendered in the man who, not living on daily wages, is bound in some degree to take thought for the morrow, to calculate his ways and means, to husband his resources for a rainy day, to make forecasts of the provision for himself and his family. To this I attribute it that the small French proprietor, the Irish farmer, the Indian ryot, the Scotch weaver (who is unhappily passing from us), are or were all saving, thrifty men. Where will you find a better class than the old Scotch handloom weaver, the careful, thoughtful, well-educated, independent man, the owner of his own cottage and patch of garden ground, generally prudent, and always ready to hold his own in argument? No doubt modern mechanics make more; but do they accumulate more? The habit of living upon weekly wages diminishes the necessity for forethought. The practice of migrating in search of the best market takes away the desire to own a house and garden. I think it cannot too often be repeated that the great economic question of the day is to reconcile the modern arrangement of capitalist and workmen with sufficient incentives to prudence and economy; that is the problem at the bottom of all plans of co-operation, and of most of the questions connected with trades' unions and the like.

Very intimately connected, too, with this question is the great and most difficult subject of pauperism. Poor Indian ryots manage to get on without poor laws because they are prudent self-workers. The poor Irish farmers for the most part do the same. In most European countries there are no poor laws. Yet when the people of a country are reduced to the position of labourers poor laws become a necessity. It is found in practice that people living on wages do not make the same provision for themselves and their helpless relations that self-workers do. There has been a strong disposition to meet this tendency by a more severe administration of the poor laws, by driving poor people into the workhouse. I confess that I doubt the efficacy of this system; at any rate I think it may be carried too far; and I was glad to hear Mr. Walter of the "Times" make a manly stand against it in his place in the House of Commons.

It is for us to treat the matter scientifically, and to consider the principles on which poor relief is founded. The Scotch are a logical people, and they are inclined to take the view that payments to the poor rates are a kind of insurance. They pay rates when they are well-to-do, and they think they are well entitled to pensions from the rates when they are disabled. Is this view a correct one? or if not, what is the real principle of poor rates and poor-relief? I think that these are questions which must be answered by those who would take a severe view of the relief system. I am inclined to doubt whether English doctrinaires or central boards can much improve on our careful and prudent system of out-door relief administered by local bodies who thoroughly know their own people.

Even if time permitted I would not venture to deal with great commercial questions in the presence of those who so much better understand them; but there is one question of pressing importance at the present time to which I must allude, the more as it is much connected with the country of which I have a large personal knowledge, India; I mean the silver question. He would be a bold man indeed who would prophecy the value of silver as compared with gold a few years hence. I certainly shall not attempt to do so. There are countries, China especially, of which we know very little; and I apprehend that the course of the silver-market will very greatly depend on the action of the States of the Latin Union and the United States of America. The disposition of the Government of India seems to be to adopt a waiting policy; and there are not sufficient data to enable any one to pronounce with confidence that this course is wrong. "When in doubt what to do, try how it will "answer to do nothing," is a maxim of much value. The only plan to which personally I have a little inclined is to put more silver into the rupee; and that would not be safe till we are sure that the change in the relative value of the precious metals is permanent.

On one point only in connection with this subject I should like to say something further. The belief has been expressed, and the Silver Committee has accepted the suggestion, that India is likely to absorb an increased and increasing quantity of silver for currency purposes. This I greatly doubt. It is said that in many parts of India silver is yet little known for purposes of exchange, most transactions being conducted by the primitive method of barter. This I think quite a mistake. I have as wide an experience of India as most men; and I know no part of India where traffic is by barter for want or ignorance of coin, except the most remote hill regions of the most savage and unexplored aboriginal tribes which are yet hardly known even geographically. The Hindoos are a very old people; they used coin freely when we had none; and they have not forgotten the use of it. I should say that the special feature of their transactions is the use of a great deal of coin in cases where we should use notes, cheques, or bills. And my impression is the opposite of that which has been suggested. I am inclined to think that as more modern ways are learned less coin will be required, not more. When I first went to India very large quantities of coin were hoarded. Every prosperous native prince who managed his finances well according to native ideas hoarded very large sums in coin. On the occasion of successions, minorities, and otherwise we ascertained the reality of these hoards. The weight and power of a prince or noble was estimated by his store of treasure. So in grades below, there was much disposition to put by stores of rupees; and the prosperous peasant, like the Frenchman, either buried rupees in his hut or made them into ornaments for his family—a little capital to be converted into cash when necessity arose. Till very recently paper money was wholly unknown; and even yet it is used but to a very minute degree compared with its use in European countries.

Now that the country is more opened up every day, that there is more confidence in the British peace, that new channels of enterprise, new wants and ideas are developed, I believe that the habit of hoarding coin diminishes. Natives, princes, and nobles spend their money in many new ways. When they accumulate they lend it to the British Government to make railways in their territories, or undertake enterprises of their own, or put it in "Government "paper." Smaller people travel by railway, enter into speculations, and utilise their money instead of hoarding it. In one direction, as people become richer the ornaments on their wives and children may become more valuable; but in another direction, there is less hoarding of capital in this form.

In a country where the coin of legal tender is so bulky as silver there is much greater occasion to use paper money freely than where the currency is gold. I see not why, as confidence in our notes increases, they may not come to be used ten, or twenty, or fifty times as much as at present, why notes for large sums and silver for smaller sums should not constitute the currency for transactions above those for which copper suffices. If the tendency of things should be at all in the direction which I have indicated, it would follow that while we might understand the absorption of a vast amount of silver in the past half century, we might also suppose that the tendency thus to absorb that metal will not continue.

I would ask your permission now to turn for a moment to the subject of education, and to suggest that here of all things there is the amplest room for substituting scientific inquiry and a scientific treatment of that great economic agency for the empirical system hitherto followed. Let us try to work out what are the objects of education, and by what methods they may be best attained. How far and at what stages of the progress of the young human being is education useful as a mental gymnastic, and how far and when as a means of communicating positive knowledge to be retained. As a mental gymnastic, which are the faculties most to be cultivated? and in which, boys or girls, are particular faculties to be drawn out? Can we classify and distinguish the faculties of the mind—distinguish memory from the reasoning power for instance?

I am inclined to think that under the present haphazard system a boy generally gets that mental training which he least wants. The boy with a good memory, who does not need the excessive development of that faculty, does work depending on memory because "he has a turn for it;" and his reasoning powers remain dormant for ever. The only boy whose reasoning powers are exercised by Euclid is the rare boy who has a *turn* for that sort of thing, and who does not need such a gymnastic.

Then, when we come to the acquisition of knowledge, can we not distinguish the knowledge to be turned to use in after life? Is there no distinction in the teaching of boys destined for one sphere of life or another? In England, at any rate, do not the chains forged by degrading endowments tie down almost all to the same dull routine? Is the knowledge of the things, the creatures, and the uses of the world put in due proportion to mere empirical learning? I ask all these questions without pretending to answer them; but I do again venture to suggest that education at present, of all things, requires scientific inquiry and scientific treatment. We must even, in dealing with education, go to the bottom of things, and inquire how far qualities are born, and how far they are produced by association and education.

As regards the education and employment of women, is not there great room for scientific inquiry on the question how far the mind of woman differs from that of man? Is there not, in fact, a very considerable mental difference between man and woman, just as there is a considerable bodily difference? Is not a woman, to some extent at least, a different creature from man, so that we may in some sort predicate that under certain conditions a man will act in one way and a woman will act in another way, in the same manner (though not in the same degree) as we can predicate that a dog will act in one way and a cat in another? To some degree I am inclined to think that there *is* some natural difference, and that this difference must be taken into account in determining the treatment, the employment, and the functions of women.

It is because I thoroughly sympathise with the desire of so many women of the middle classes to find useful and honourable employment for themselves, that I think scientific inquiry into the economic capacities of the creature woman most necessary. If we can once solve that part of the problem, the rest will be comparatively easy. I feel sure that there are many functions, whether they depend on nimbleness of finger, sympathy of heart, or quickness of intellect, for which women are especially fitted, while there are others for which their nature is less fitted and in respect of which they will do well to avoid an unequal rivalry with man.

As education fits a man for his duty in the scheme of economy, so dissipation of various kinds unfits him; and we can hardly exclude from economic science the effect of the abuse of stimulants. I was going to say use and abuse, but I think it may be doubtful whether there is any real use for stimulants at all. In dealing with the matter scientifically, it seems very necessary to inquire how far the appetite for various stimulants is connected with questions of race and climate, and what is the comparative effect of pure stimulants and those which have a narcotic element. It does seem that man when he has a chance will indulge in some luxuries, and that drink cannot be stopped by preaching alone. Perhaps the best hope of a remedy may be to discover the means by which innocuous enjoyment may be afforded to him in consonance with his constitution and tastes. It may be a question fairly open to consideration whether the whisky of the Scotchman is or is not as injurious as the semi-narcotic beer of the Englishman. And then we have the larger question, whether the wholly narcotic opium of the Chinese is worse than, or as bad as the alcohol of European countries.

I have been led into the suggestion that these things are very much a matter of race, by observation of the very singular way in which in Asia the populations are divided into those who use opium and those who use alcohol, according to race-lines, even in countries where the facilities of obtaining the one or the other are precisely similar. In the east of India I found that the consumption of opium in the various districts was just in proportion as a Turanian or Chinese element prevailed in the population. The Aryan races of India never take to opium in a very great degree, except in the case of some of the Sikhs, whose religion prohibits the use of tobacco. Even in the districts where the poppy is almost universally cultivated by the ryots (and they supply the opium which the Chinese consume), it is a happy fact that the native population does not take to the common use of opium; and there are no greater symptoms of the ill effects of the drug than in districts where it is very rare and dear—far less so than in districts where the cultivation is not permitted, but where there is an Indo-Chinese population. I cannot but think that such race proclivities open up an important field of inquiry.

From so fertile sources of crime as drink and other stimulants one not unnaturally passes to justice and the repression of crime, as essential to economic safety and prosperity. No one who has experienced the vast relief obtained by the change from a crude and undigested state of the law to the use of codes, can doubt the immense advantages of codification. It is very greatly to be regretted that so little progress in that direction has been made in this country. Not only would there be a great direct gain, but there would be this enormous advantage, that in a codified shape the laws of the three kingdoms might be assimilated. The very great judicial advantages which we possess in many respects in Scotland would be communicated to the sister kingdoms; and, on the other hand, we should obtain in Scotland some modern reforms which we need. We should get rid of that shocking anomaly and hindrance to business, the necessity of passing in the same legislature separate laws for England and Scotland, only because there is a difference in the legal phraseology and some of the details. I have been much struck by the extreme ignorance which prevails in England regarding our Scotch criminal system. The world is ransacked for examples in regard to such questions, as, for instance, the examination of the accused; and yet there is not one well-educated man in England in a thousand who knows that in his own island, at his own door, there is a system of criminal procedure most radically different from his own, and, as I venture to think, very worthy of English imitation. Who in England has the least idea of the wholesome Scotch system under which the first inquiry includes the examination of the prisoner before lawyers are permitted to see him, and the record for judicial use of the statements which he makes?

After judicial inquiry comes punishment; and here I am inclined to believe that the civilised world is still very much at fault. I think there is still immense room for scientific discussion on the subject of punishments. There are some great subjects, such as sanitation and punishments, in respect of which I believe that the experts claim a certainty and a knowledge which has not yet been attained. On the contrary, I think there is still every thing to be gained by inquiry and experiment conducted without prejudice or preconceived conclusions. The mere shutting-up a man in prison without severe treatment is by no means a sufficient deterrent to all natures; and when we seek to be severe, we clash with modern notions of humanity. In one shape, indeed, there seems to be a disposition to revert to a form of torture—that is, by flogging. Yet after a great experience I am myself much convinced that of all forms of corporal punishment flogging is the most uncertain, ineffective, and dangerous. In a light and simple form it is good for juvenile delinquents, whose offences are petty, and whom we would not contaminate by a first imprisonment. And flogging is to some natures a material addition to other punishments. But as soon as we try to carry it beyond this we are placed in this dilemma, that a flogging which is *safe* is an insufficient punishment: a more severe flogging is a sort of lottery: nineteen or ninety-nine men it may not harm, the twentieth or hundredth it will kill. I really believe that it would be safer to cut off a finger or an ear than to attempt to deal with serious offences by flogging only.

It is because I think we do not yet fully understand the science of punishment that I am myself opposed to a too uniform and centralised system of prison management. I thoroughly admit that there is much room for reform in regard to the number of our jails and for improvement in the management of many of them. Measures to carry out these objects I would gladly see. But, doing so much, I would still both retain in this as in other things the services of the many experienced local magistrates who in this country give so much time and attention to local business, and leave a considerable latitude for some variety of treatment and some facility of experiment in regard to the treatment of criminals.

I do not attempt to go into further detail on these subjects. I am sure that it is better that I should not detain you longer, but should give place to the many interesting papers which will illustrate this section, and which will, I trust, lead to many important discussions. If the scope of this section is somewhat wide and perhaps less defined than that of other sections of the Association, which deal with more precise branches of science, it at all events includes a variety of subjects of much practical and immediate interest. If only on the subject of silver currency some light can be shed, great good will be done. That subject will be treated by very able hands; and we shall have the advantage of men of great practical knowledge in discussing it. Other subjects I might mention which will be brought before you in papers of great interest; but they will speak for themselves, and I need not enumerate them here.

ADDRESS *of the* PRESIDENT *of the* DEPARTMENT *of* "ECONOMY *and* "TRADE," *of the* NATIONAL ASSOCIATION *for the* PROMOTION *of* SOCIAL SCIENCE, *at the* TWENTIETH ANNUAL CONGRESS, *held at* LIVERPOOL, *in October*, 1876. *By* G. J. SHAW LEFEVRE, ESQ., M.P.

ON acceding to the request that I should preside over the Department of Economy and Trade at the present meeting of this Association, I felt that the task was one of more than usual responsibility. We meet in one of the most important and active of our commercial centres, in the greatest of our seaports, a city vitally interested in the matters we have to discuss. The questions, also, which at this moment affect the trade and the economical conditions and relations of this and other countries are of no ordinary difficulty—the causes of the present depression in trade observable throughout the whole commercial world, equally in the Far West as in the East, and concurrent with almost a plethora of capital and money in this country; the cause and effect of the depreciation of silver, which hangs like a nightmare over Indian finance and Indian trade; the questions of the Indian Tariff and the duties levied in that part of the Empire on the productions of Lancashire; the present condition of the Free Trade movement; the negociations for the renewal of the Commercial Treaties with France and other European powers; the slow progress which Free Trade doctrines appear to make in the practice of nations, notwithstanding that they have received the almost universal assent of economists and thinkers; lastly, the questions raised by the completion of the return known as the new Domesday Book, which, for the first time, throws some real light on the state of ownership of the land in the United Kingdom. These are questions which can only be dealt with and solved by keeping steadily in view the principles which the science of Political Economy teaches us govern the production and distribution of wealth. Each alone, might, if fully treated, serve as a subject for a long address.

With reference to the present state of trade, I may be permitted to point out that it is not more than seven years since this country was passing through a period of even more severe symptoms. The years 1868-70 were years of grave commercial distress. Great numbers of working men were unemployed. Pauperism had increased in an ominous manner. We were under much alarm about the future of our manufactures. It was said that we were in danger of losing our foreign markets, and that even our home markets were being invaded by foreign manufactures in those very trades in which we believed ourselves to be unapproachable. I recollect well that, in the year 1870, my right honourable friend, Mr. Goschen, then at the head of the Poor Law Board, was compelled to use all his eloquence in the House of Commons, and all the weight of the Government to oppose a project for giving State assistance to the emigration of our artisans, which was supported by two members of the present Ministry. In the same year it fell to my lot, as representing the Board of Trade during the illness of Mr. Bright, to defend the principle on which the French Treaty had been based from an attack led by one of the members for Manchester, and supported by the then member for Coventry, and other members from manufacturing constituencies; an attack based on the ground that the Treaty was detrimental to the industry of this country, inasmuch as it had not secured to us complete reciprocity or equivalent advantages in French markets which we conceded to French goods in this country. The arguments then used showed how imperfectly understood are the principles of free trade by large sections of our fellow countrymen, and how easy it is, when trade is bad, for even intelligent persons to abandon sound doctrines, and to relapse into errors of a most serious character. The years I speak of were followed almost immediately by a rebound of prosperity. In the three following years our trade expanded by giant strides. The conclusion of the Franco-German war, the immediate necessity for renovating the wasted stocks and supplying the deferred wants of Germany and France, and the expansion of railway enterprise in the United States, led to an extraordinary demand upon our industrial resources, especially in the iron trade. Our export trade increased by 30 per cent. Trade profits were enormous; wages rose almost universally. After a time coal, which is the main constituent in the cost of manufacturing iron, rose to a famine price. There was this peculiarity about it that we had famine prices in coal, without a bad harvest of coal. The production of coal was greater in the years 1872-73 than in any previous years, yet its price rose to three or four times the average of previous years. For a time the coalowners had complete command of the market; as they raised the price, the labourers in the mines not unnaturally claimed higher wages, and this, in its turn, became the excuse to the coalowners for a further rise in prices. This extraordinary rise in the price of coal was fraught with great injury to the trading interests of the country. It told with serious effect upon a great number of industries; it speedily crushed the iron manufacture; it brought heavy losses to the steam carrying trade. It led to vast speculative enterprises in coal mining. New mines were opened in all directions. The production of coal, or the means of producing it, were greatly increased, at the same time that the demand for it was reduced by the great falling off in the manufacture of iron. The result is, that coal has now fallen almost to the price of 1871, and that the wages of miners have been reduced in almost corresponding ratio. We are now suffering in great part, I believe, from the above cause, from the reaction after the prosperity of those years, from the results of the speculative mania induced by it, from concurrent action of the same kind in the United States, and in part also, I doubt not, from the repudiation of their debts by so many foreign States, who, while borrowers, were also consumers of our productions, and who now, that they have ceased to borrow, have ceased to import our manufactures in return for worthless obligations. With cheap coal, with abundant capital, with reduced wages, I see no reason to fear for the future, and no grave apprehension from foreign competition. Low prices of the necessaries of life—corn, sugar, cotton and coal—are a great boon to the mass of consumers, though they may mean small profits to the importing trade. It is, perhaps, on this account that, notwithstanding the general complaints of bad trade, the working classes do not appear to have suffered equally. The import of articles they most consume continues on an ever increasing scale. The returns of pauperism show no sign of reaction from the great decrease which has taken place since 1870. The railway returns show that the third-class traffic has greatly increased during the past half-year, while that of the other classes has diminished. Except in the iron trade there are no large number of men unemployed; and, even in this trade, it would seem that the workmen, during the great prosperity of previous years, must have laid by far more than they were credited with, and are now living upon this accumulated fund. One thing is clear, that the great variety of our trade, due to the full adoption of free trade, enables us to tide over difficulties and depression infinitely better, and with less suffering, than is the case with those countries which still cling to protection. In the United States, notwithstanding its boundless wealth in raw material and food, the present state of trade has been productive of far greater loss and suffering to the working classes than in this country. We have heard from New York of large assemblages of men out of work demanding employment from the civic authorities, and setting up a claim for national workshops. This year has, for the first time, shown a greater number of return immigrants from the United States than of emigrants to it, and commercial distress there is in every respect worse and more widely spread than with us. The reason is, that under a system of protection, such as the Americans still enforce, native industry is necessarily limited to its home markets, and a depression of trade in this one market causes vastly greater suffering than where trade is cosmopolitan, and commerce free and open.

The consideration of this leads me naturally to the next question I propose to deal with, namely, the present position of the free trade movement. At the last meeting of this Association my predecessor, Mr. Grant Duff, gave so full and complete an exposition of the then position of this country with reference to our commercial treaties with Europe, of the objects which had been aimed at by the negociation of these treaties, and of the results already attained, that he has left nothing to be added thereto. It suffices for me to take up the thread where he left it. Mr. Grant Duff pointed out that the commercial treaties which were concluded between the various European powers upon the model of the Anglo-French Treaty of Mr. Cobden, were all interdependent on one another, and that they would stand or fall together. The last of these treaties was to expire during the present year, and consequently this year would determine whether the policy on which these treaties were based would continue or not. When Mr. Grant Duff spoke it was still matter of doubt what the verdict of Europe would be. Vast efforts had been made by interested trades to induce their Governments to retrace their policy and to adopt a more protectionist programme in future negociations. For this purpose combinations were formed. The iron manufacturers of North Germany, the cotton, woollen, and iron manufacturers of France, those of Austria and Italy, were all engaged in an agitation for increased protection. It, therefore, behoved free traders to do their best, not merely to spread their views further and to make some advance in the new treaties, but even to retain the ground which they had already won.

At the present time, though we have not seen a conclusion to the negociations, we are better able to judge of the strength of the protectionist party in Europe. A commission has been for some time past sitting in France upon the subject of the commercial treaties, and from what I hear of its proceedings, I am able to say that the protectionists will not succeed in reversing the policy of the Treaty of 1860, though they may prevent any further advance in the direction of free trade. The same may now be predicated of Italy. The protectionists, though lately victorious in Austria proper, have been checkmated in Hungary, and it is probable that the general policy of that empire will be determined by considerations favourable to free trade. In Germany the iron manufacturers have been completely defeated. A short time ago the Government carried a Bill, against their most violent opposition, for abolishing the duty on iron, iron manufactures, machinery, and railway engines on the first of next year; I have, however, recently seen a statement in the papers that the Government has consented to postpone this total abolition for two more years. While, however, the efforts of reactionary manufacturers have been unsuccessful in obtaining a return to protection, they will, it is believed, with the exception I have named, succeed in preventing any advance. They will be able to maintain the *status quo* of the treaties of 1870. Those treaties, I need hardly say, are very far from securing a system of perfect free trade. So far as this country was concerned we abandoned almost every vestige of protective duty—I say "almost," because there is a question whether our customs duties on spirits and manufactured tobacco are not still somewhat of a protective character, and our duties on Spanish wines are complained of as bearing unfairly upon Spain—but in France and the other treaty powers, although the prohibitive system previously in force was abandoned, duties were left upon nearly all manufactured articles, which are still a very serious drawback to trade. The principle adopted in these countries appears to have been so to calculate the comparative cost of manufacture in their own and rival states, and so to impose duties on foreign productions as to admit of importation, but not on a scale which could threaten their own manufactures. Upon this principle duties varying from 10 to 20 per cent. are still levied in almost every European country, and this not for the sake of revenue, but for the avowed purpose of giving a moderate protection to home manufactures. In the United States the duties range up to 50 per cent. on many articles. It is, I think, a melancholy subject for the reflection of economists that one hundred years from the publication of Adam Smith's great work, which clearly proved the advantage of free trade and the folly and fallacy of protection, thirty years after the full adoption by England of free trade with such signal results, and after fifteen years' experience of the modified protection by other countries of Europe, free trade should still be in question. In the United States, and in most of our colonies, the protective policy still flourishes, as though Adam Smith had never written and Cobden never lived. Few economical facts are at once more humourous and sad than to watch the calm resignation with which the Rouen cotton spinners accept the loss of Alsace and Lorraine. The German terms of peace inflicted upon France the loss of one third of their cotton manufacturing districts, and a duty of about 25 per cent. protects the chief industry of Rouen from the now German competition of the spindles and looms of Mulhouse and Strasbourg. The full benefits of free trade can never be attained until all duties are removed;—all duties that in any way create disparity between the productions and manufactures of the exchanging countries. How very far we are from this I have already shown. I will illustrate it, however, by one or two special examples:—

There is the article salt, a most valuable one for the trade of the Mersey. The most accessible and productive salt mines in the world are within easy reach, and salt is exported hence to every part of the world, to the extent of 800,000 to 900,000 tons, employing shipping to that amount, and rendering many an import trade possible which otherwise might not exist. I need hardly say, also, how important salt is, not only for consumption, but for purposes of agriculture, and as an ingredient in a vast number of manufacturing processes. I find that the import of salt is free in the following countries only:—Holland, Belgium, Norway, Sweden, and Portugal. It is absolutely prohibited in Italy, Austria, Greece, and the Black Sea provinces of Russia. The duty imposed on it in France is 150 per cent. on its value in the Atlantic ports, and 50 per cent. in the Mediterranean ports. This is practically prohibitive, and no salt is exported hence to France. In the Baltic ports of Russia the duty is about 600 per cent., in Germany about the same, in Denmark 180 per cent., in Spain 200 per cent. In the United States the duty is 180 per cent. when imported in sacks, and 130 per cent. when imported in bulk. When we look to our own dependencies things are not much better. In India the manufacture of salt, till a few years ago, was a State monopoly. A duty was imposed on imported salt equal to the supposed profit of the Government. Under this system no salt whatever was exported to India. Some years ago, however, the Government of Bengal abandoned the State manufacture of salt in that province, and imposed an excise duty on its manufacture equivalent to the import duty, and, in consequence, an export trade grew up from Liverpool to Bengal, which now amounts to 328,000 tons per annum. It is scarcely credible, however, that, notwithstanding this great result, the State manufacture of salt still continues in Madras and Bombay. It is still contended by officials in these provinces, that the import duty is no more than the profit on the State manufacture, and yet not an ounce of salt is imported from this country.

One other illustration. There is an article of food with which nature has abundantly supplied this country, or rather the seas which surround it, viz., fish. On this account it would almost seem as if Europe had taken unusual pains to load it with duty, and thus to prevent their people sharing in this harvest of the sea. Fish is free of duty only in Holland and Belgium. In France the duty is very high upon the finer qualities of fish, such as turbot and soles. On the coarser kinds of fish, such as herrings, sprats, plaice, and skate, the duty is almost prohibitory, amounting to nearly 100 per cent. The duty is so high that it prevents our fishermen going into French ports with their newly caught fish, as they could dispose only of the better qualities of their take, the rest would be wasted. The duty on dried fish is also all but prohibitory in France. The main object is to encourage French fishermen as a reserve for their navy; but the dislike to the "Inscription Maritime" is such that no industry shows less expansion in France than that of fishermen, notwithstanding that they receive heavy bounties on their fish in addition to their protection against foreign competition. One result of this system is that the French Government is compelled to send cruisers to our coasts, during the fishing season, in order to watch their fishermen, and to prevent them buying fish from the British fishermen out at sea, with the object of claiming the bounty in French ports. I recollect, some few years ago, when employed on a commission at Paris, on the subject of the Fishery Convention between England and France, our commission was favoured with an interview by the late Emperor, and we took the opportunity of raising the question of these heavy duties. The Emperor told us that he fully concurred in our views as to the bad effect of these duties, but he said that the French fishing population was a very ignorant one, and, as such, completely under the influence and under the special care of their priests, and that when the question of reducing the duty on fish was raised in the Assembly, such an agitation was created by the clericals in favour of their clients, that it was impossible for his Government to make any advance.

Now what are the hopes for the future? I believe free trade will make little further advance either in Europe, America, or in our colonies until it can be shown conclusively to a majority of the people concerned that the real interests of the trades, which are supposed to benefit from protection, lie in free trade. I recollect that Mr. Cobden used to say that he never felt that he made much progress in the agitation for free trade in this country until he began to use the argument to landowners that it was an entire mistake on their part to suppose that they were benefited by protection; and certainly this has been most conclusively proved. So it will be with other trades. We must endeavour to prove to other countries that they are mistaken in their policy as regards even the very trades which they hope to promote. Before 1860 we had only our own experience to quote, but since 1860 we have all the experience resulting from the treaties, and a number of other cases which supply all the facts necessary to prove this proposition. There was not a trade which was then threatened by competition which did not prophecy its own destruction. There is not one which can point to any evil results. The iron and woollen and cotton trades with France have increased in a greater ratio since 1860 than ever before, although foreign competition, to a limited extent, has been permitted. Again, when Alsace was forcibly taken by Germany, it was fully anticipated by its manufacturers that ruin would befall them in consequence of the competition with German industries; they have prospered more even than before. There is the case of the Swedish manufactures, which Mr. Erskine has shown in an admirable report, have flourished more and more in proportion as they were freed from the duties supposed to promote them. I undertake to say that no case can be brought forward of an industry having, in the end, really suffered from free trade; on the contrary, those most protected, when freed and exposed to competition, have been stimulated to fresh exertions, and have gained rather than lost; while a reduced cost has always stimulated consumption. On the other hand, to show the effect of protection upon particular trades, it is sufficient to quote Mr. David Wells, who, speaking of the United States, says: "Every prophecy so confidently made in the past, as to the "results of protection in inducing national prosperity, has been "falsified; and one has only to pick out the separate industries "which have been especially protected, to find out those which are "more especially unprofitable and dependent."

But then it is said that in a certain early stage of the development of a country it is necessary to foster and encourage nascent industries, and for this purpose it is said to be wise to put on protective duties, even with the certainty of taxing the community for the benefit of such industries. The argument received the assent of Mr. Mill, and has done infinite mischief to the progress of free trade; for his admission has been readily laid hold of by protectionists in every part of the world, and has been held to afford a plausible argument for a vast number of protective duties. It forms the stock argument of the American protectionists to this day, in a country where more than half a century ago manufactures were firmly established, and were even then competing with us in markets which they have now lost through their protective system. It is difficult to conceive the case of the young community to which the argument would fitly apply; one might, perhaps, expect to find such a case in our Australian colonies; but experience and a careful comparison drawn between the two colonies of Victoria and New South Wales, the first of which adopted a very protective system, and the other a very free trade system, shows that on this very point the free traders have the advantage. In proportion to its population and wealth New South Wales has a greater number of manufacturers in those very industries most protected in Victoria. I have already quoted the case of Sweden, where the same results are shown. The fact is, that under a system of free trade, the growth of industries and manufactures is spontaneous and robust, they are born of the wants of the people, and they are not fostered into existence by an artificial process. On the other hand, under a system of protection, industries are taught from their earliest existence not to trust to their own exertions, but to rely upon protection, they are generally weakly bantlings. They are ever calling for more protection and higher duties, rather than endeavouring, by renewed exertions and by adapting themselves to the tastes and wants of their customers, to meet competition on good terms. A trade is thus created with interests and hopes antagonistic to those of the rest of the community. It becomes a kind of vested interest. It creates around it a circle of dependent interests, all associated in the same object of maintaining protection, and of taxing the community for their sakes; and long after the time when under the most extreme view the industries have passed through the period of infancy, should give up their swaddling cloths, and should walk without assistance, they still succeed in imposing upon their fellow citizens the obligation of supporting them. The writings of Mr. David Wells illustrate this in so many ways and in so many cases with reference to the protected industries of the United States, that we have the most complete inductive proof of the unsoundness of the protective system, even as a means of creating and fostering in their early stages native industries. He shows how many trades have been ruined by the protection accorded to others. He points out how the effect is to create monopoly and to retard improvement and invention. In one of his last addresses he shows how this policy leads to violent alternations in trade—at one time to excessive expansion, at another to undue depression.

"The effect of protection," he says, "is, that in shutting out "foreign producers, they had at the same time necessarily shut "themselves in. The surplus of production over consumption "was, therefore, not allowed to have a free market; it could not "flow out of the country through the ordinary channels of export, "and, consequently, it inevitably rolled back upon the domestic "markets, paralysing industry until consumption again became "equal to or exceeded production." In this way he explains the great vicissitudes of trade in America: at one time inflation and over production, at another extreme depression, works shut up and men thrown out of employment. The whole of his writings on this subject are worthy of the closest attention. That they should not have already convinced the Americans of the folly and failure of their protective system is proof of the influence which protected industries obtain, and how powerless against them is a resigned and careless public. I am glad to be able to add that Mr. Wells, in writing Mr. Hastings to express his great regret at being unable to be present here, states his confident belief that the days of protection in the United States are numbered.

The same reasons appear to me to make it undesirable to maintain the import duties on cotton manufactures in India. Though the duty is small, it is unquestionably of a protective character, and it is defended by many on the ground that it is wise to foster a nascent manufacturing industry. It would, I think, be a misfortune to India that the vested interest of a great protected industry should grow up there. It would never admit itself to have grown out of its state of infancy; the larger it becomes, the more difficult it will be to remove the duties. It appears to me to be of great importance both to India and this country that their commercial relations should be as great as the natural conditions of the two will permit. It is quite certain that, even without protection, there is the opportunity for the growth of a great manufacturing industry in India, and such an interest will be far more stable and sound if it be the natural result of the economical position of India, than if it be due to a protective policy. Although, therefore, the financial condition of India may make it difficult to repeal the cotton duties at this moment, I think every endeavour should be made to make them as little protective as possible, and to abolish them as soon as possible.

With reference to Europe, I will only add that although the results of our commercial treaties have been very great, they fall very far short of what they would be, were there perfect free trade. The countries in the North of Europe—Norway and Sweden, Denmark, Holland and Belgium—have generally adopted of late years more liberal tariffs than the other powers of Europe. Comparing the results, and omitting Holland, a great part of whose trade with us is a transit trade, I find that since 1859 our trade with the three countries with the more liberal tariff has increased 300 per cent., and that both export and import trades have increased in the same ratio. With the four countries with less liberal tariff, France, Germany, Austria, and Italy, our trade has increased about 100 per cent.—our imports therefrom have increased 150 per cent. and our exports only 75 per cent. Our trade with the Channel Islands, which is perfectly free, amounts to 20*l.* per head of the population of those industrious islands; our trade with Belgium, under a liberal tariff, to 6*l.* 10*s.* per head of the population; our trade with France amounts to only 2*l.* per head of population. Our trade with France has increased from a total of 26 millions in 1859 to 73 millions in 1875. But in 1859 our exports and imports with France nearly balanced one another. In 1875 the imports from France were nearly double our exports to her, viz., 46 millions to 27. In other words, while the exports to France have doubled since 1859, our imports from that country have quadrupled, showing that the treaty has had infinitely greater effect upon our import trade from France than upon our exports. It is the result of almost perfect freedom of trade on one side of the Channel.

I am not one of those who attach any importance to the balance of trade with a particular country, nor would I advocate a policy of retaliation founded on this difference. The import trade is relatively as valuable to us as the export trade. We must pay for these imports by exports elsewhere, but I do not hesitate to say that our export trade to France, and to Europe generally, is vastly less than it might be; and if there were equal and perfect freedom on both sides of the Channel, and between the various countries of Europe, trade would be developed and increased to a degree of which we have little conception or example.

Lastly, it is to perfect free trade, and to a great increase of commercial relations between the European States, that alone we can look for any antidote to the military spirit which now infects the whole of Europe. There is but little hope for any scheme of mutual disarmament, or general reduction of standing armies. Never was the curse of these greater than now. Never was there greater danger from them. But, with absolute and entire free trade, I feel persuaded the interests of Europe would become yearly more connected and interlaced, so that it would be difficult to cut them even with the sword.

While on this point, I cannot avoid remarking on one of the most extraordinary economic facts of modern times, namely, the revival of France from the misfortunes and losses entailed upon her by her war with Germany. Never did a country appear to be more hopelessly crushed by the weight of its losses, and by the large indemnity imposed on it by the victors. Yet she has borne her burthen with heroism, and has emerged from her difficulties with an elasticity which has surprised Europe.

The contrast between France and Germany at this moment is most remarkable. The defeated, humiliated, and plundered country is apparently richer than ever. The victorious country, the "Pays "des Milliards," the recipient of the indemnity, appears to be not only none the richer but absolutely the poorer for the transaction. The feverish excitement caused by the influx of so much wealth has now given place to a reaction in which all commercial transactions are involved; general gloom and distress pervade the country. In a recent comic paper published at Berlin, it was suggested as a remedy for the general distress in Germany as compared with France, that Germany should again declare war against France, that it should again march its armies to Paris, again defeat those of France, but, in making peace, in lieu of imposing an indemnity of 200 millions on France, it should agree to pay that amount to the conquered. By that means alone, it was humourously suggested, would Germany secure to itself the prosperity which France was enjoying. What then is the economic explanation of this great difference in the condition of the two countries? Why is it that the loss of 2 milliards has not made the one country poorer, or the gain not made the other country richer? Is not the explanation to be found in this, that the true and only source of wealth is production and saving? The French people are the most industrious and saving that the world contains. In no other country is wealth so widely distributed. In none are habits of industry, economy, and thrift more universally exercised. After the war these people, from the highest to the lowest, met their losses by even greater industry and greater economies than ever. Now, when they have retrieved their losses and overcome their difficulties, this habit is still continued. On the other hand, the influx of money to Germany led to a general expansion, not only of trade, but of the habits of living. Luxury of all kind increased. Foolhardy speculations multiplied. Unproductive employment was stimulated. In the subsequent collapse the people as a whole have lost more than they gained by the indemnity, while it is no easy task to divert so much unproductive labour into its old channels of production.

The great recuperative power shown by France has again turned the attention of economists to her social condition. What is it that constitutes her strength? What is it creates this universal habit of thrift and industry? It cannot, I think, be doubted that the answer is to be found in the wide distribution of property which is so distinguishing a feature of the French system. Upwards of 7 millions of persons own property in land or houses, and of these $5\frac{1}{2}$ millions are owners of agricultural land. Upwards of 4 millions of persons own between them the public debt of France. The passion for land has not only created 5 millions of peasant proprietors, the most industrious and thrifty people in the world, but it has spread through the whole population from the highest to the lowest, the feeling of individual ownership, the desire to become independent, and the habit of thrift and saving which enables them to become so.

I wish I could follow this subject into a branch of inquiry which is now creating great interest in France, namely, the effect which the subdivision of property has upon the rate of increase of her population. The rate of increase in France is lower than in any other country, it is so low that it may almost be said that the population is stationary. Is this due to the subdivision of property, and if so, is it matter for congratulation or regret? A more momentous question was never propounded to economists and statesmen. It is one to which I could not do justice in the time that remains to me.

The consideration of the ownership of property in France leads me naturally to say a few words upon that of this country. I am able to congratulate the department on the completion, since its last meeting, of the return of landed proprietors for the three countries of England, Ireland, and Scotland. This return leaves much to be desired. It is admitted that in many of its details there is great inaccuracy. The return by no means exhausts the whole subject. It accounts for 33 millions only out of 37 millions of acres in England. The difference is due to the omission of woods and forests, of manorial wastes, and of the metropolitan district. With all its defects, however, the return is of great value in enabling a fair estimate to be made of the ownership of land. With the exception I have named, I believe the aggregate results may be relied upon. The return shows a total of 1,173,000 owners of land and houses. A vast proportion, however, of this number are of owners of houses only. 850,000 are entered as the owners of less than one acre, with an average of one-fifth of an acre, and an average value of 40*l.* per annum. Of the owners above one acre, a very considerable number are also owners of house property in towns. In the case of Ireland we have a separate return, showing the number of landowners as distinguished from the owners of property in towns; and, whereas, the new Domesday Book gives a total of 32,600 owners of above one acre, the other return gives a total of only 19,000, from which again a reduction has to be made for duplicate entries—that is for persons owning property in more than one county. The return also includes a vast number of entries under the head of corporations, charities, public bodies, glebes, &c. Making a deduction, then, for these, for house property, and for duplicate entries, it may be safely estimated that there are not more than 200,000 owners of land, as distinguished from owners of mere house property, in the United Kingdom. Of these, about 5,000 owners of 2,000 acres and upwards divide between them two-thirds of the whole area of the country, averaging nearly 10,000 acres each; 65,000 owners of between 60 and 2,000 acres have rather more than one-fourth of the country; and 130,000 own one thirty-fifth of the country, with an average of about 15 acres each. The estimate will, I think, fairly represent the state of things. It is impossible to arrive at a perfectly accurate statement, on account of the difficulty caused by duplicate entries. As an illustration of this, I may mention that the "Scotsman" recently published a list of the separate properties entered in the return under the names of peers; it brought out this result, that the 523 peers own, on the average, properties, each in three different counties, with an aggregate of 15,400,000 acres, or one-fifth of the whole area of the United Kingdom, and a yearly value of 13,700,000*l.*, giving an average of 30,000 acres, and 25,000*l.* a-year, for each peer, irrespective of woods, manors, London property, and land let on long leases, a somewhat startling fact, as bearing upon the extent to which property has been aggregated in a few hands in this country.

Comparing this state of things with France, it is at once evident what an immense disparity there is between the two countries. According to Monsieur de Lavergne, speaking, however, before the severance of Alsace, when the area of France was about one half larger than that of the United Kingdom, there were then, in France, 50,000 owners of so-called large properties, averaging 750 acres each, with an aggregate of 37 million acres, or one-third of the area of France. There were 500,000 medium-sized proprietors, averaging 75 acres each, and with an aggregate of another one-third of France, and there were five millions of small proprietors, with an average of 7½ acres, and owning together, the remaining one-third of France. A greater contrast between two countries it would be difficult to imagine. The one is the paradise of small proprietors, the other of large proprietors.

It is to be observed that the aggregation of land in few hands has been carried to a far greater extent in Ireland and Scotland than even in England. In parts of England there is still a class of yeomen and of small proprietors. In Ireland and Scotland these classes are almost unknown. In Scotland, after deducting house properties, duplicate entries, and property in mortmain, there are certainly not more than 8,000 proprietors of land to a population of 3½ millions and an acreage of 20 millions. In Ireland, out of a population of 5½ millions, and a total area of 21 millions of acres, there are not more than 17,000 landowners, and only 50,000 other persons who have a permanent interest even in a house.

In England, then, 1 person out of 130 is probably an owner of land; omitting London, 1 person out of 30 owns a house. In Scotland, 1 person out of 400 is an owner of land, and 1 in 28 of a house. In Ireland 1 in 315 owns land, and only 1 in 120 owns a house.

There are other circumstances which appear to me to make this state of things far more serious in Ireland than in the other two countries. The population of Ireland is almost wholly employed in agriculture. It is a country of small farms. There are no less than 600,000 agricultural holdings, averaging 34 acres each; 168,000 average 20 acres, and 138,000 average 12 acres each. The economical defence often put forward for large properties, that they conduce to large farms, and to a commercial treatment of the land, cannot be urged in defence of the state of things in Ireland. There is no country where the peasantry cling with more passionate love to the soil. It is a country where one would have expected to find a large body of peasant proprietors. No such class exists. In their place we have a multitude of peasant farmers, holding, with rare exceptions, under yearly tenancies, doing for their land and houses those improvements which in England are done by the landlords, but protected in such tenancies by the undefined and unrecognised custom of the country, and, to some extent, by the Land Act of 1870 against arbitrary and vexatious ejectment. Does not this state of things fully explain the chronic state of discontent in Ireland? Does it not account for agrarian troubles, and for demands made with so much passion for fixity of tenure? It seems to me, as it has seemed to many others, that there is no country in the world where the creation of a farmer proprietary, in its broadest sense, is more needed; none where better results might be expected from the gradual introduction of a peasant proprietorship, whether we look at the question from the economic or political point of view.

Two efforts have, in recent years, been made by Parliament in this direction, the one by what are known as Mr. Bright's clauses in the Land Act of 1870, and the other by the Irish Church Disestablishment Act of 1869. Under Mr. Bright's clauses it was proposed to facilitate the purchase, by tenants, of land sold by the Encumbered Estates Court. The clauses, however, for some unexplained reasons, have not produced much result. About 700 such sales only have been effected. The other attempt, though on a smaller scale, has been more successful. Under the Irish Church Act, the landed property of the Church, with a rental of about 200,000*l.* a-year, was directed to be sold. The land was held by nearly 10,000 farming tenants, paying, on the average, 20*l.* a-year. The commissioners were directed to offer the land, in the first instance, to the tenants, who were to be permitted to pay at once only one-fourth of the purchase money, and to pay off the remainder by instalments of principal and interest spread over thirty-two years. The commissioners, in their last report, state that they have effected sales, in this way, of one-half the Church property; already upwards of 4,000 tenants have availed themselves of the offer, and the commissioners say that they expect the remainder will be sold in the same manner. They add the very important fact that a better price is obtained from the tenants than from other purchasers, and that the tenants are generally able to find the necessary one-fourth of the purchase-money; the average price obtained has been twenty-five years' purchase of the yearly rental, while, in the Encumbered Estates Court, the average, of late years, has been only twenty years' purchases. In many cases money has been sent over from America to assist in the purchase. The intention and effect of the Irish Church Act is now fully appreciated; and the agricultural tenants are almost universally anxious to purchase their farms. When the operation is completed, nearly 10,000 new landowners will have been created, an addition of more than 50 per cent. to the existing number. In view of this success, it is eminently worthy of consideration why Mr. Bright's clauses in the Land Act should have had so little result. Is it due to the want of some authority to negociate with the tenants, or to some defect in the clauses? Under the Encumbered Estates Act, no less than one-fourth of the whole of Ireland has been sold during the last twenty years. What incalculable good might have been done had Parliament long ago taken this opportunity of facilitating the purchase of these lands, or a great part of them, by the tenant. By this time we might have had a class of small landowners numbered by thousands, and influencing most materially for good the condition of Ireland, both socially and politically. If, however, it be fully recognised that it is desirable to move in this direction; if public opinion is impressed with the policy of increasing the number of proprietors, other modes of carrying it out will doubtless be discovered. There are other properties in mortmain. There are the vast estates belonging to the city companies. The strange anomaly of permitting these great dining clubs to act the part of landlords in Ireland has often been questioned. Such a kind of mortmain is the very last which is desirable. It may be a question whether they should not be compelled to sell. The further progress of this experiment of creating peasant proprietors will be watched with interest. One reason there is to fear for its future. Under our present system of land laws the complications of title are likely to become very great. Small owners are quite as apt as large owners to tie up their properties and to complicate their titles; and I fear too many of these small properties may end in being wholly consumed in law expenses. If we are to favour the increase of small proprietors, we must also do much in the direction of simplifying the laws under which land is held and transmitted.

I have already shown that the case of England is different from that of Ireland. Proportionally there are more landowners in England. There are still parts of it where a class of yeomen and small proprietors exist. It is, however, universally believed that the number of these is rapidly diminishing, and that we are constantly approaching more closely to the condition when the cultivators of the soil will be entirely detached from any permanent interest in it, and when even the smaller squirearchy will be extinguished in large estates, and when the bulk of the land will be held by large proprietors, or by villa holders. Why should the condition of England in this respect be so different from any other part of the world? In Europe, generally, the whole tendency of legislation of late years, and of public opinion, has been to favour proprietary rights as opposed to tenancy, and to promote the existence of a large body of farming or peasant proprietors. The larger part of the land is everywhere owned and farmed by the same persons. In the United States, and in our colonies, the relation of landlord and tenant of farming land scarcely exists. In the former, even in the longest settled districts, in the neighbourhood of large towns, where land has a great value, it is without exception farmed by its owners. Why is it that England should be a solitary exception to this almost universal rule or tendency elsewhere? Certainly it does not result from the necessity of cultivating the land in large holdings, for although there is a greater proportion of large holdings in England than elsewhere, a very considerable part of it consists of small holdings. The agricultural returns show that there are in England and Wales 333,000 holdings under 50 acres each, and averaging only 12 acres, and 54,500 holdings of between 50 and 100 acres, averaging 72 acres, as compared with about 82,000 holdings of above 100 acres each. Nor can it result from the action of economic laws working under a system of free transfer of land, and where the State has used no influence. On the contrary, the laws, customs and influences, social as well as political, of this country, have for centuries combined with irresistible power to promote aggregation of land, to prevent dispersion, and to make the title and transfer of land as complicated and, therefore, as expensive a process as could possibly be devised. To what extent this aggregation of land is now taking place it is impossible to say, nor shall we know for certain, until some few years hence another Domesday Book enables us to compare with the present return; an examination, however, of the present return will, I think, confirm the popular view that the aggregation of land is already very great, and is increasing. It is only the very large estates which can stand the burthen of the successive family charges which are necessitated by the system of settlements, and which can maintain the ever rising standard of luxury. I need not dwell here upon the difficulties caused by the almost universal existence of the limited owner, the tenant for life who has not complete power over his estate, either for improvement or for sale; the obstruction to the proper outlay of capital upon properties so circumstanced, the makeshifts which the legislature has adopted in order to get rid of this difficulty; neither need I dwell upon the ever increasing difficulties of local government in rural districts caused by the diminution of persons permanently interested in the soil.

Whether we regard the question from the point of view of economy, of the application of capital to the land, or from the importance of increasing the number of persons who have proprietary rights in the soil, it seems to be equally desirable that the influence and weight of our laws should be transferred to the opposite scale, and in lieu of facilitating, promoting, and protecting aggregation, it should, at least, give no encouragement to this process, but should give every facility for dispersion and transfer.

The equal partition of land on intestacy, the restriction of settlements, at all events, to one generation, the giving full power of sale to those who are now subject to settlements, the simplification of titles, and the easy means of registration which would at once result from these changes, would, slowly but surely, work in the direction suggested, and alter the tendency of our laws, and probably in the end affect other customs and influences, which those laws now protect and encourage. It is, I think, unnecessary to discuss the further expedient sometimes suggested of compulsory division of landed property on the death of its owner, such as the French "code" enforces. The freedom of willing is too much prized in this country to make it possible to entertain the proposal; though it is worthy of notice that, under the present system of settlements, the existing owners of land, as tenants for life, are almost invariably deprived of the power of bequest. Our colonists and the American people, while rejecting and repealing all our land laws, have maintained the principle of freedom of willing.

It must, also, be observed that the compulsory division of property by law in France is founded upon custom and national feeling, which is almost universal, and which would act with certainty even in the absence of any such law. It is well recognised now that in France, even under the old *régime* before the French Revolution, there was a vast number of small proprietors who always observed the custom of equal division of property at death. Primogeniture and entail were the privileges only of the nobility, and were prohibited to all other classes. The Revolution of 1789 did away with these exceptional privileges, and made compulsory and universal that which was already the custom or law for the rest of the nation; and so speedily did the principles of the revolution obtain sway, even with the upper classes, that when, after the restoration of the Monarchy, the reactionary Government of 1826 endeavoured to restore the principle of primogeniture to a very limited extent, proposing to apply it only to that portion of the landed property which, by the Code Napoleon, was disposable by will, the measure met with the most determined opposition even from the old nobility. The foremost of this body were the most active opponents of the measure; hundreds of eldest sons petitioned against it, on the ground that it would introduce discord into families; and, though supported by the Government, it was rejected by a large majority of the Chamber of Peers. The principle of equal partition of property on death is, therefore, firmly rooted in the social system of France, and is supported by an overwhelming force of opinion among all classes.

There is almost the same weight of public opinion on the subject in the United States. Although freedom of bequest is preserved and prized, the custom of equal partition of property among children is almost universal. The present American Minister, a most distinguished lawyer, informed me a short time ago, that in his country the opinion even of the upper classes of society would not support any unequal distribution of property by a testator among his children. If any great inequality were shown, it was almost certain that the will would be disputed and set aside by a jury on the ground of undue influence. This state of public opinion reminds one of the old fiction of the Roman lawyers which was invented to protect children from being disinherited by their parents. It was presumed by the courts that such a person could not be of sane mind, and under the suit known as *querela inofficiosi testamenti*, a will could be set aside unless a certain prescribed proportion of the testator's property was bequeathed to each child. It was from this source, no doubt, that the French derived their laws of compulsory division of property.

How very far opinion in this country is from any such mood I need hardly point out. Is it, however, too much to expect that a change may take place in this respect even among the upper classes? that they may learn to think that it is not wise to pursue the course of aggregation of land? that it is in the interest of property itself that it should be more widely distributed? that it would be wise to encourage the growth of proprietary rights? that the settlements usually made are unwise and unjust? and that it is better to trust their immediate descendants with full power over the family estate?

I cannot but think that the returns which I have alluded to, and a comparison which they invite with the condition of other countries, may do something to induce a change of feeling on this subject.

I have only to conclude by saying that, in my humble opinion, the distribution of property is not less a matter of concern to economists than its production. The institution of individual ownership of land, even more than of other property, rests mainly on the principle, that as an incentive to industry and thrift, it is the best promoter of civilisation and progress. The more widely, therefore, it is distributed, the more it is brought within the reach of all, consistently with that security which is the only root of all notions of property, the more will these good effects be felt; while, therefore, every facility should be given for its acquisition, no restraint should be placed on its transfer or dispersion.

I have endeavoured, at the commencement of my address, to show how other nations may profit by our example, in giving full freedom to trade and commerce; I have concluded, by venturing to point out how, guided to some extent by their experience, we may apply the same principle of commercial freedom to land, with a result not less beneficial in the future to the people of this country.

The Physical Requirements *of* Factory Children.

By Charles Roberts, F.R.C.S., *&c., late Assistant Surgeon to the Victoria Hospital for Children, &c.; Assistant to the Commissioners appointed to Report to the Local Government Board on "Changes "in Hours and Ages of Employment of Children and Young "Persons in Textile Factories,"* 1873.

CONTENTS:

PAGE
1. The Duties of the Factory Surgeon are to certify to the age of Children and Young Persons and to their Physical Capacity for Work 681
2. There are no Physical Qualities sufficiently distinct and constant to indicate the exact Age of a Child 682
3. A Certificate of Birth would not be sufficient evidence of Physical Fitness for Factory Work 682
4. The General Statistical Tables are arranged to show the Actual, the Average, and the Mean Height, Chest Girth, and Weight of about 10,000 Factory and other Children, and the relation which these Physical Qualities bear to each other 684
5. Tables showing the Relations between the Heights and Weights of 1,000 Boys of the exact age of 14 years 688
6. Table showing the Mean Rate of Growth of Children between the ages of 8 and 14 years, for determining the Typical Proportions of any Child of the Labouring Class 690
7. On the Advantages of the Certifying System and the Necessity for a Uniform Method of carrying it out 691
8. Tables of the Height, Chest Girth, and Weight of 1,000 Children of each Age and both Sexes, from which are deduced Minimum Standards of Physical Capacity for Factory Work 693
9. Tables showing the Mean Proportions of the Body of Children of the Factory Ages 732
10. Table showing the number of Children to a Family in the Factory and other Districts 733

The Acts of Parliament for regulating the labours of children and young persons in factories and workshops, "require of all children "and young persons up to the age of 16 years, as a condition of "employment in any factory, the production of a certificate of age "and physical capacity for work. This certificate, as given in "general by the certifying surgeon, certifies that the holder has "the ordinary strength and appearance of a child at least 8 years "of age, or of a young person of at least 13 years of age, as the "case may be, and states the belief of the certifying official that he "or she is at least of the age specified, and certifies that he or she "is not incapacitated by disease or bodily infirmity from working "daily in the factory in question." The Royal Commissioners appointed to inquire into the working of the Factory and Workshops Acts, from whose report (1876) this definition of the duties of the certifying surgeons is taken, recommend that the Factory and the Workshops Acts should be assimilated, and that all children employed under its provisions should produce certificates of birth and be subject to medical inspection as to their physical fitness for their respective occupations.

In the same report the question has been raised and is discussed at length in the separate report made by The O'Conor Don, whether the services of the certifying surgeons cannot wholly be dispensed with when the age of a child or young person can be established by the production of a certificate of birth; and some of the sub-inspectors express opinions in favour of this view, though the mass of the evidence is in favour of the opinion expressed in the general report of the Commissioners, that the certifying surgeons have given valuable aid in the administration of the Acts hitherto, and are necessary for their proper observance in the future.

As, however, the certifying system is a great tax on the manufacturers who pay the fees, the grounds of objection are deserving of consideration. They are of two kinds: the first, that surgeons are unable to certify to the exact age of children, and that they often make great mistakes in their attempts to do so; and the second, "that previous factory legislation has rendered medical "certificates useless and antiquated, as factories are more healthy, "labour less fatiguing, and bodily disease and infirmity uncommon "and excluded from employment by the simple commercial con- "sideration that it would not pay for engaging."

With regard to the difficulty of determining the ages of children, and the mistakes which occur in attempting to certify them, I am satisfied, from a large number of observations and inquiries made among all classes of children, that *there are no physical qualities sufficiently distinct and constant to indicate the age of a child within two, and often three years, of its actual birthday, and that a certificate of birth is the only evidence which can be relied on;* and the converse of this is equally true, *that age is not an indication of any constant physical qualities, and a certificate of birth is not, therefore, sufficient evidence of fitness for factory work, and cannot supply the place of a proper medical examination.*

By referring to Tables III and IV, which show the principal physical qualities, the height, weight, and chest girth, of a thousand boys and a thousand girls of each of the factory ages, it will be seen at a glance that no one of these qualities, nor all three combined, are sufficient to distinguish the children of one age from those on either side of it, except in a few cases of overgrown and undersized children at the top and bottom of each age-column. If, for instance, we take the three columns of the heights of children of the ages of 10, 11, and 12 years, we find that there are only 3 children of the age of 12 taller than those of 11, and only 7 of the boys of 11 years are taller than those of 10. The difference is still less at the bottom of the columns, where we find the dwarfs of the respective ages. There is one boy of 11 years shorter in stature than those of 12, and 4 of 10 shorter than those of 11 years; but of 2,000 boys of the two ages of 11 and 12 years, 1,996 are of similar heights, and it would be quite impossible to judge, by height alone, whether any one of these boys was 11 or 12 years old; and the same remark applies to all the other columns of the series, and to the chest girths and the weights as much as to the heights. Moreover, the wide range of growth at each age, extending in a thousand boys to 16 inches, and carrying with it an almost equal development of other physical qualities, renders height and bulk of body worthless as indication of age.

Neither are averages of the least use for this purpose. Thus the average height of boys of the age of 11 years is 52½ inches, but of a thousand children of that age there are only 153 of the average height, 420 being above and the same number below it. Of the same height as the 153 boys of 11, viz., 52½ inches, there are 4 of the age of 8, 60 of the age of 9, 128 of the age of 10, 121 of the age of 12, and 99 of the age of 13 years. In 6,000 boys there are 220 boys older and 192 younger, any one of which might pass as an average boy of 11 years, as far as height is concerned. We need no more convincing proof than this of the worthlessness of mere averages of physical qualities so commonly used for deciding questions of this kind. An average conveys to the mind no definite idea of the great variableness of the individuals from which it has been deduced; thus, the difference between the average child of 10 and the average child of 11 years is 2 inches, but the difference between the shortest and tallest boy of either age is 16 inches, or about a third of the mean height.

To avoid confusion, I have dealt only with the figures in the tables of heights, but the same remarks apply equally to every other physical quality which can be measured. In the weights there is a still wider variation. The difference between the weights of an average boy of 10 and one of 11 years old is 6 lbs., but the difference between the lightest and heaviest is about 46 lbs., and the heaviest boy of the age of 10 years is double the weight of the lightest boy of the same age.

The development of the teeth is probably the physical quality which most nearly indicates the ages of children between 8 and 14 years; but from a careful examination of a large number of children working in factories, and others living in town and country districts, but not following any occupation, and therefore having no inducement to disguise or misrepresent their ages, I am convinced that the order of the appearance of the teeth varies so widely in different individuals and different classes of society, that it cannot be trusted as a test of age. My observations lead me to the conclusion that the permanent teeth are developed earlier in town than rural populations, and oftener in small, physically ill-developed children than in well-grown healthy ones. Taking the agricultural children as a standard, I should say that the factory children were older than they represented themselves to be, which is very improbable, as the parents of the children are generally anxious to overstate their age, in order that they may the sooner pass as "full-"timers" and earn higher wages. I am disposed to attribute the premature decay of the teeth so much more common in the large manufacturing towns, in both factory and non-factory children, than in the agricultural, to this premature development and to some faults in the diet common to the whole factory population. In the non-factory districts diseased dentition was found to occur at the rate of 35·6 per 1,000, but in the town factory districts at the rate of 89·1 per 1,000, or more than double the normal rate.

Although there are no physical signs sufficiently uniform and constant to enable the certifying surgeon to determine the age of a child, it is very necessary it should be known, as it is indicative of a certain amount of physiological development which is not seen on the surface, and cannot be weighed or measured, and which give value to others which can be so ascertained. A child of 9 years of age having the same physical proportions as one of 10 or 11 would not have the same "staying" powers, and should not be subjected to the same amount of labour if each were worked up to his full capacity for it.

Presuming that a certificate of birth can be obtained, I propose to show from the statistics which I now submit to the Society, the relations which exist between the ages and the heights, chest girths, and weights of the children, for the purpose of forming minimum standards similar to those used for the examination of recruits for the army and navy, and which may form a wider and more intelligible basis for future factory legislation.

The general tables show the *actual*, the *average*, and the *mean* height, chest girths, and weights of nearly 10,000 factory and other children of the working classes, arranged for the purpose just mentioned, and as useful standards of reference for medical officers and managers of charity and poor law schools, idiot asylums, &c. The tables also show the relative physique (as far as it can be determined by height, chest girth, and weight) of the children at present employed in cotton and woollen manufactories, and others living under similar social conditions but not following any occupation, but chiefly attending schools.

The statistics have been derived from the following sources:—

I. The factory, agricultural, and town population, from measurements made by myself and other assistant commissioners in Lancashire, Cheshire, and Yorkshire, for the purposes of Dr. Bridges' and Mr. Holmes's "Report to the Local Government "Board on the Proposed Changes in Hours and Ages of Employ-"ment in Textile Factories, 1873." The headings of the columns sufficiently indicate the different classes and occupations of the children.

II. The children of soldiers, from measurements made under the superintendence of Dr. Crosse, medical officer of the Royal Military Asylum, Chelsea, and extracted from the register of that institution by his permission.

As the children of one parent of full military stature, and born in our large garrison towns, these boys, who are well fed, drilled, and cared for, form a fair standard of the ordinary urban population.

III. The children of sailors, from measurements made under the superintendence of Mr. G. W. Armstrong, medical officer of the Royal Hospital School, Greenwich, and taken from the register by his permission and assistance. These boys are the children of naval men chiefly employed in the coastguard service, and are, therefore, a good standard of the rural population.

Each table is divided into two parts, to distinguish the children who live in towns from those who live in the country, and each of these divisions is further subdivided into columns showing the occupation of the children. Columns containing the total number of town children and of country children are given, and these again are combined to form a grand total of all the children of the same age. For the purpose of comparing the grand totals with each other, the numbers have been reduced to a uniform rate per thousand, and are given separately in Tables III and IV.

The statistics of the children of the same age are arranged in columns opposite to each other on a horizontal line of *means*, *i.e.*, the measurements and weights at which the greatest number of observations occur. This central line of figures represents the *typical*, or *mean child* of the respective ages to which the tables refer, and shows how the individual children of each class range above or below it, and in like manner the averages of each class. At the bottom of each column are given the totals, the averages or mathematical means (obtained in the usual way by dividing the sum of the values observed by the number of observations), and the means, when they are sufficiently marked, for reference and comparison. It will be observed in many instances that the *averages* and *means* do not quite agree; this is due to the irregularities in the development of the children at each end of the columns—the giants and dwarfs which are found to exist at all periods of life.

It is very important to bear in mind this distinction between the averages and means, and when the latter is sufficiently indicated to use it for purposes of comparison, as it does not vary with accidental deviations from the type as does the average.

From a study of the statistics I now submit to the Society, and others in my possession, I have arrived at the conclusion that the law which fixes the typical or mean child, applies also, within certain limits, to the variations above and below the mean. Thus, on referring to Table V, we find that the typical boy of the age of 8 years, or rather 8½ years (the mean of all the observations between 8 and 9 years), has a height of 46½ inches, a chest girth of 22½ inches, and a weight of 55 lbs. Another boy of the same age, but an inch taller, has half an inch more chest girth and is 2 lbs. heavier, while another boy an inch shorter in stature has half an inch less chest girth, and is 2 lbs. lighter in weight. Variations occur in the numbers on corresponding lines of the tables, but this arises from differences in the ages of the children, some being 8 years old and others nearly 9; the numbers of observations are not alike in all the tables, and there is the disturbing element of the irregular development of giants and dwarfs. When the numbers refer to the same boys, we find a remarkable concordance between the heights and weights, as will be seen on comparing the following table of the heights and weights of 771 boys of the exact age of 14 years. The chest girth of the whole number has not been recorded, so no comparison can be made on that head.

Table I.—*Showing the Heights and Weights of Seven Hundred and Seventy-One Boys of the Exact Age of Fourteen Years, and the Difference between the Two Series of Observations.*

Height in Inches.	Number of Observations.	Weight in Pounds.*	Number of Observations.	Difference.
From—		*From*—		
64 to 65	1	108 to 112	1	0
63 „ 64	4	104 „ 108	5	1
62 „ 63	4	100 „ 104	8	4
61 „ 62	8	96 „ 100	13	5
60 „ 61	19	92 „ 96	20	1
59 „ 60	27	88 „ 92	34	7
58 „ 59	62	84 „ 88	56	6
57 „ 58	87	80 „ 84	96	9
56 „ 57	127	76 „ 80	134	7
55 „ 56	131	72 „ 76	136	5
54 „ 55	117	68 „ 72	120	3
53 „ 54	84	64 „ 68	85	1
52 „ 53	63	60 „ 64	40	23
51 „ 52	16	56 „ 60	16	0
50 „ 51	15	52 „ 56	4	11
49 „ 50	6	48 „ 52	3	3
	771		771	—

* Without clothes, in all the other tables 10 lbs. has been added for the weight of the clothes.

It will be seen that the greatest differences which occur between the numbers of the heights and the weights are among the dwarfs, near the bottom of the columns, whereas the larger numbers grouped round the mean, near the centre of the columns, differ little from each other. The inference I draw from this table is, that the mean height of a boy of 14 years is 56 inches, and his weight (without clothes) 76 lbs., and for every variation of an inch in height there is a corresponding increase or decrease of 4 lbs. in weight. It may be objected that there is no necessary connection between the two series of observations, and that the numbers have arranged themselves in the binomial curves which all such observations, subject to small errors, assume. For the purpose of testing my theory by the results of actual observation, I have collected the heights and weights of 1,000 boys of the exact age of 14 years, with Mr. Crosse's permission, from the register of the Royal Military Asylum, and have arranged them in the following table in a manner to show their relation to each other. The mean height is 56½ inches, and the mean weight 76 lbs.

TABLE IA.—*Showing the Relation of the Weight to the Height of One Thousand Boys at the exact Age of* 14 *Years, taken from the Register of the Royal Military Asylum, Chelsea.*

Weight in lbs. Without Clothes.	Height in Inches.																Total Number at each Weight.	Average Height in Inches.
	49 to 50.	50 to 51.	51 to 52.	52 to 53.	53 to 54.	54 to 55.	55 to 56.	Mean. 56 to 57.	57 to 58.	58 to 59.	59 to 60.	60 to 61.	61 to 62.	62 to 63.	63 to 64.	64 to 65.		
From— 112 to 116																1	1	64·50
108 „ 112														1	1	1	3	63·50
104 „ 108									1	—	—	—	1	1	1	1	5	61·90
100 „ 104								1	1	2	—	1	2	1			8	59·63
96 „ 100								3	1	—	—	7	2	3	2		18	60·44
92 „ 96						1	—	—	1	5	1	8	3	1	3		23	60·23
88 „ 92					0	—	—	1	6	11	10	7	6	1			42	59·40
84 „ 88					1	1	2	8	9	22	13	11	4				70	58·67
80 „ 84					1	2	9	19	28	21	14	6					100	57·70
76 „ 80					1	13	22	50	35	20	7	2					150	56·85
	Mean.																	
72 to 76				2	16	38	41	46	24	8	2						177	55·78
68 „ 72			1	10	19	52	57	19	5	2							165	54·96
64 „ 68		5	6	20	39	33	20	7	3								133	53·94
60 „ 64		3	6	22	18	9	5	6	—								69	53·41
56 „ 60	4	3	2	12	4	2	1	—	1								29	52·36
52 „ 56		2	2														4	51·00
48 „ 52	2	1															3	49·83
Total number at each height...	6	14	17	66	98	151	157	160	115	91	47	42	18	8	7	3	1,000	57·30
Average weight...	55·33	60·57	62·47	64·06	67·30	70·60	72·21	76·25	79·32	83·18	84·12	89·52	92·88	99·50	99·14	110·00	75·16	—
Mean weight......	54·0	58·0	62·0	64·0	66·0	70·0	72·0	76·0	80·0	84·0	86·0	90·0	94·0	98·0	100·0	110·00	76·0	—
Typical weight ...	48 to 52	52 to 56	56 to 60	60 to 64	64 to 68	68 to 72	72 to 76	76 to 80	80 to 84	84 to 88	88 to 92	92 to 96	96 to 100	100–104	104–108	108–112	—	—

Now if all the boys had typical proportions, the whole of the figures in the body of this table would be included between the two diagonal lines which indicate the typical weights for each height in succession from left to right; but as we know that many boys are not typically formed, especially at the age of 14 years, when there is the disturbing element of advanced or retarded puberty, it is sufficient that the lines should include the means of each column. In this respect the table is confirmatory of my theory. Near the middle of the table there are seven columns where the actual and the theoretical means are nearly the same, while the dwarfs are 2 lbs. heavier and the giants 2 lbs. lighter than my scale indicates. The number of observations at each end of the table are not sufficient to show the true means, and giants and dwarfs are acknowledged variations from the ordinary laws regulating human proportions. It is quite in accordance with general observation that dwarfs are heavier and giants lighter, in proportion to their heights, than the average boys of 14 years, and it is no doubt the same at all other ages.

From the materials given in the general tables, formulæ can be constructed for determining the typical proportions of *any* child which may come under the notice of the certifying surgeon; but the variations may be too numerous to make them of much practical value. Thus, having obtained the proportions of the mean child and the rate of his increase from year to year, and taking height—which is the most constant element—for the unit, we can fix his scale of proportions for each year or for any portion of it. This scale would apply within reasonable limits to the same variations in height above and below the means of the years from which it is deduced, or, in other words, two children of the same stature should have the same chest girth and the same weight, although one may be 8 and the other 9 years of age. As, however, the rate of increase is not uniform, a separate scale must be constructed for each year, which will only be applicable to the two years from which it is deduced. The following table is an attempt to construct scales of proportions for each of the factory ages.

Table II.—*For Determining the Typical Height, Chest Girth, and Weight of any Child of the Working Classes between the Ages of Eight and Fourteen Years.*

Age.	Mean Boy.			Rate of Increase from Year to Year.			Ratio of Height, Chest Girth, and Weight.		
	Height.	Chest Girth.	Weight.	Height.	Chest Girth.	Weight.	Height.	Chest Girth.	Weight.
	In.	In.	lbs.	In.	In.	lbs.	In.	In.	lbs.
7½....	44·5	22·0	52·0	—	—	—	—	—	—
8½....	46·5	22·5	55·0	2·0	0·5	3·0	1	0·25	1·5
9½....	48·5	23·0	59·0	2·0	0·5	4·0	1	0·25	2·0
10½....	50·5	23·5	63·0	2·0	0·5	4·0	1	0·25	2·0
11½....	52·5	24·0	69·0	2·0	0·5	6·0	1	0·25	3·0
12½....	53·5	24·5	75·0	1·0	0·5	6·0	1	0·5	4·0
13½....	55·5	25·5	81·0	1·5	1·0	6·0	1	0·75	4·0

This scale may be applied in the following manner:—Supposing it is desired to find the chest girth and weight of a child of 11½ years of age, whose height is 48½ inches. The mean child of 11½ years has a height of 52½ inches, so that our supposed child has a minus difference of 4 inches; we must therefore deduct four times the values given in the three last columns opposite 11½ years, and we get the proportions required. Thus:—

	Height.	Chest Girth.	Weight.
	In.	In.	lbs.
Mean child	52½	24·0	69
Different	4	1·0	12
Supposed child	48½	23·0	57

On the other hand, if the child is 4 inches taller than the mean, we must add the difference to the mean, and we get 56½, 25, and 81 as the typical proportions. If the child is half a year older or younger than the mean, only half the values must be used.*

The measurements in this table apply to boys only, but on comparing the boys and girls in Tables III and IV, it will be seen that the *mean girls* are almost uniformly half an inch shorter, have half an inch less chest girth, and are from 2 lbs. to 3 lbs. lighter in weight than the boys of corresponding ages, so that the corrections can easily be made. This rule, however, does not apply to girls of

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* Quetelet says that the weight grows a little more rapidly than the square of the height.

13 years of age, who are a little heavier and taller than boys of the *same age in this country.**

The assertions that previous factory legislation and the consequent improvement in the health and physique of the factory population has rendered medical examination of children unnecessary, hardly deserve serious consideration, did they not indicate the difference of opinion which exists among factory inspectors and certifying surgeons as to what the physical requirements of factory children really are or ought to be. It would, indeed, be very deplorable, if after forty years of protective legislation no decided improvements had taken place in the health and physical development of the factory operatives, and such statistical evidence as I have been able to collect shows that some improvement has taken place. Thus, on comparing the weights of factory children given by Stanway in the report of the Royal Commissioners, 1833, and those given in my tables, and taken in 1873, the result is highly in favour of the latter :—

Average Weights.

	Age Last Birthday.			
	9.	10.	11.	12.
Factory children, 1873	58·56	61·55	66·68	70·57
„ '33	51·76	57·00	61·84	65·97
Difference....................	6·80	4·55	4·84	4·60

From these figures it will be seen that a factory child of the present day of the age of 9 years, weighs as much as one of 10 did in 1833, one of 10 now as much as one of 11 then, and one of 11 now as much as one of 12 then; each age has gained one year in forty years. We have also some statistical evidence that a large number

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* The following figures show the difference between the two sexes. The boys and girls were chiefly factory operatives :—

Number Observed.	Boys' Average Height.	Number Observed.	Girls' Average Height.	Number Observed.	Boys' Average Weight.	Number Observed.	Girls' Average Weight.	Number Observed.	Boys' Chest Girth.	Number Observed.	Girls' Chest Girth.
24	55·21	14	56·08	596	70·22	650	71·00	32	25·52	10	25·32

Professor Bowditch, of Boston, United States, informs me that the girls are taller and heavier than the boys in that city. In Belgium, according to Quetelet, the two sexes are of the same weight at 12, but the boys are heavier at all other ages.

of children are refused as physically unfit for factory work. I have collected the following figures from a paper in the "Sanitary "Record" (September, 1875), by Dr. F. Ferguson, of Bolton, of the children he has passed and rejected of the age of 13 and upwards during the years 1872 and 1873:—

Year.	Passed.				Rejected.			
	Males.		Females.		Males.		Females.	
	Number.	Weight.	Number.	Weight.	Number.	Weight.	Number.	Weight.
1872....	82	74·09	164	77·50	127	64·14	74	63·62
'73....	74	74·90	173	77·00	110	63·20	64	64·80
	156	74·50	337	77·25	237	63·67	138	64·21

The proportion of the rejected to the passed is as 1 to 1·31. The fact elicited by Dr. Bridges and Mr. Holmes of the greater prevalence of flat-foot among factory than agricultural children is very significant, the factory children being affected by this deformity at the rate of 79·0 cases per thousand, while the agricultural had only 17·1 cases per thousand.

It is probable that Dr. Ferguson has a higher standard of physical requirements than many other certifying surgeons, but a large number of rejections must be made by every conscientious surgeon if the factory population is no better or no worse than the general population of the country. It is not, however, by counting the number of such rejections that we can estimate the benefits of the certifying system, as its very existence, no doubt, forms a barrier which many diseased and deformed children never attempt to pass.

As age alone cannot be relied on, and as much difference of opinion exists as to the health and physique of the factory population, it is important that some uniform plan for determining the physical requirements of the children should be adopted, not only to assist the surgeon in the performance of his duty, but to protect the children and their parents from inexperienced, careless, or crotchety officials. My statistics, of which Tables III and IV are the summaries, offer materials for the formation of standards of such requirements which, as the result of so large a number of observations, must be trustworthy.

TABLE III.—*Showing the Height, Chest Girth, and Weight, of One Thousand Boys of the Ages from Eight to Fourteen Years.*

HEIGHT.

Height in Inches.	Age Last Birthday.						Total Number at each Height.
	8.	9.	10.	11.	12.	13.	
From—							
62 to 63	—	—	—	—	—	2	2
61 ,, 62	—	—	—	—	3	4	7
60 ,, 61	—	—	—	2	5	16	23
59 ,, 60	—	—	—	5	17	32	54
58 ,, 59	—	—	2	14	29	27	72
57 ,, 58	—	—	5	20	58	79	162
56 ,, 57	—	1	4	53	104	151	313
55 ,, 56	—	3	15	93	139	146	396
54 ,, 55	1	9	28	121	154	188	501
53 ,, 54	2	14	73	167	178	137	571
52 ,, 53	4	60	128	153	121	99	565
51 ,, 52	22	84	159	153	108	54	580
50 ,, 51	37	126	170	109	38	44	524
49 ,, 50	93	162	160	58	31	12	516
48 ,, 49	140	188	127	37	9	7	508
47 ,, 48	191	156	72	12	4	2	437
46 ,, 47	185	102	38	2	2	—	329
45 ,, 46	149	63	15	1	—	—	228
44 ,, 45	105	21	2	—	—	—	128
43 ,, 44	45	8	2	—	—	—	55
42 ,, 43	15	2	—	—	—	—	17
41 ,, 42	6	1	—	—	—	—	7
40 ,, 41	4	—	—	—	—	—	4
39 ,, 40	1	—	—	—	—	—	1
Total	1,000	1,000	1,000	1,000	1,000	1,000	6,000
Average	46·93	49·01	50·6	52·13	53·8	54·95	—
Mean	46·5	48·5	50·5	52·5	53·5	55·0	—

Table III.—*Showing the Height, Chest Girth, and Weight—Contd.*

Chest Girth (Boys).

Chest Girth in Inches.	Age last Birthday.						Total Number at each Measurement.
	8.	9.	10.	11.	12.	13.	
30·5	—	—	—	—	—	1	1
30·0	—	—	—	—	—	4	4
29·5	—	—	—	—	—	6	6
29·0	—	—	—	—	—	13	13
28·5	—	—	—	—	1	25	26
28·0	—	—	—	1	2	34	37
27·5	—	—	2	5	10	61	78
27·0	—	—	7	15	23	68	113
26·5	—	6	8	16	46	120	196
26·0	—	10	21	39	88	130	288
25·5	4	14	34	66	145	155	418
25·0	18	37	82	107	166	110	520
24·5	25	70	112	112	196	100	615
24·0	70	111	159	181	128	76	725
23·5	88	148	142	139	103	54	674
23·0	160	184	150	152	65	30	741
22·5	176	168	138	89	20	9	600
22·0	166	131	80	57	6	4	444
21·5	156	68	40	14	1	—	279
21·0	90	38	20	7	—	—	155
20·5	40	11	3	—	—	—	54
20·0	6	4	—	—	—	—	10
19·5	1	—	—	—	—	—	1
Total	1,000	1,000	1,000	1,000	1,000	1,000	6,000
Average	22·26	23·0	23·52	24·1	24·71	25·79	—
Mean ...	22·5	23·0	23·5	24·0	24·5	25·5	—

TABLE III.—*Showing the Height, Chest Girth, and Weight—Contd.*

WEIGHT (BOYS).

Weight in lbs.	Age last Birthday.						Total Number at each Weight.
	8.	9.	10.	11.	12.	13.	
From— 100 to 114	—	—	—	—	—	20	20
98 ,, 100	—	—	—	—	—	21	21
94 ,, 98	—	—	—	—	6	25	31
92 ,, 94	—	—	—	3	7	23	33
90 ,, 92	—	—	—	6	15	26	47
88 ,, 90	—	—	2	8	12	47	69
86 ,, 88	—	—	7	12	20	84	123
84 ,, 86	—	—	7	14	23	66	110
82 ,, 84	—	—	5	17	29	105	156
80 ,, 82	—	1	13	39	50	103	206
78 ,, 80	—	5	14	39	70	83	211
76 ,, 78	—	9	29	57	70	76	241
74 ,, 76	—	13	32	73	110	73	301
72 ,, 74	4	17	51	74	108	69	319
70 ,, 72	9	30	69	108	104	59	379
68 ,, 70	16	30	94	115	95	48	398
66 ,, 68	20	69	95	93	79	29	385
64 ,, 66	35	83	110	89	74	22	413
62 ,, 64	57	104	119	72	63	5	420
60 ,, 62	83	132	111	72	23	7	428
58 ,, 60	122	122	81	43	17	2	387
56 ,, 58	139	118	68	28	14	7	374
54 ,, 56	175	99	45	22	5	—	346
52 ,, 54	129	86	27	7	4	—	253
50 ,, 52	84	36	9	6	2	—	137
48 ,, 50	52	26	7	3	—	—	88
46 ,, 48	42	11	3	—	—	—	56
44 ,, 46	23	4	2	—	—	—	29
42 ,, 44	9	3	—	—	—	—	12
40 ,, 42	1	—	—	—	—	—	1
Total	1,000	1,000	1,000	1,000	1,000	1,000	6,000
Average	55·0	60·12	65·03	70·04	73·87	78·55	—
Mean	55·0	59·0	63·0	69·0	75·0	81·0	—

TABLE IV.—*Showing the Height, Chest Girth, and Weight of One Thousand* GIRLS *of the Ages from Eight to Thirteen Years.*

HEIGHT.

Height in Inches.	Age last Birthday.					Total Number at each Height.
	8.	9.	10.	11.	12.	
From—						
60 to 61...........	—	—	—	—	12	12
59 „ 60...........	—	—	—	2	11	13
58 „ 59...........	—	—	—	7	14	21
57 „ 58...........	—	—	3	7	55	65
56 „ 57...........	—	1	4	33	35	73
55 „ 56...........	—	6	8	46	124	184
54 „ 55...........	—	2	26	46	134	208
53 „ 54...........	—	12	44	112	162	330
52 „ 53...........	3	38	74	164	138	417
51 „ 52...........	6	64	126	176	123	495
50 „ 51...........	31	112	180	154	101	578
49 „ 50...........	68	162	174	121	51	576
48 „ 49...........	117	176	150	75	29	547
47 „ 48...........	201	169	100	35	5	510
46 „ 47...........	197	127	80	15	6	425
45 „ 46...........	155	76	17	7	—	255
44 „ 45...........	138	37	10	—	—	185
43 „ 44...........	56	11	4	—	—	71
42 „ 43...........	12	7	—	—	—	19
41 „ 42...........	10	—	—	—	—	10
40 „ 41...........	6	—	—	—	—	6
Total	1,000	1,000	1,000	1,000	1,000	5,000
Average	46·48	48·44	49·87	51·74	53·22	—
Mean..................	46·5	48·0	50·0	51·5	53·0	—

TABLE IV.—*Showing the Height, Chest Girth, and Weight—Contd.*

CHEST GIRTH (GIRLS).

Chest Girth in Inches.	Age last Birthday.					Total Number at each Measurement.
	8.	9.	10.	11.	12.	
28·0	—	—	—	—	2	2
27·5	—	—	2	12	14	28
27·0	—	1	7	14	14	36
26·5	—	2	15	26	31	74
26·0	—	6	17	62	55	140
25·5	—	17	44	73	93	227
25·0	3	14	48	95	128	288
24·5	27	53	84	129	142	435
24·0	19	66	89	145	138	457
23·5	107	130	172	133	140	682
23·0	102	134	141	99	117	593
22·5	219	198	191	130	66	804
22·0	126	159	84	44	41	454
21·5	181	113	74	33	16	417
21·0	92	65	23	5	3	188
20·5	80	40	9	—	—	129
20·0	43	19	—	—	—	62
Total	1,000	1,000	1,000	1,000	1,000	5,000
Average........	22·27	22·57	23·2	23·84	24·26	—
Mean	22·0	22·5	23·0	24·0	24·5	—

TABLE IV.—*Showing the Height, Chest Girth, and Weight—Contd.*
WEIGHT (GIRLS).

Weight in Pounds.	Age last Birthday.						Total at all Weights.
	8.	9.	10.	11.	12.	13.	
100 to 114	—	—	—	—	5		5
98 ,, 100	—	—	—	—	11		11
96 ,, 98	—	—	—	—	4		4
94 ,, 96	—	—	—	—	9		9
92 ,, 94	—	—	—	5	8		13
90 ,, 92	—	—	—	2	5		7
88 ,, 90	—	—	—	3	20		23
86 ,, 88	—	—	—	4	19		23
84 ,, 86	—	—	—	5	17		22
82 ,, 84	—	—	—	11	54		65
80 ,, 82	—	—	13	27	34		74
78 ,, 80	—	1	6	33	48		88
76 ,, 78	—	8	3	28	54		93
74 ,, 76	—	3	14	51	75		143
72 ,, 74	—	13	24	48	64		149
70 ,, 72	5	9	32	83	95		224
68 ,, 70	0	18	56	76	107		257
66 ,, 68	6	18	60	100	78		262
64 ,, 66	6	62	104	84	68		324
62 ,, 64	17	54	94	94	61		320
60 ,, 62	46	103	104	98	54		405
58 ,, 60	46	99	96	83	48		372
56 ,, 58	103	129	120	59	28		439
54 ,, 56	138	128	97	63	21		447
52 ,, 54	164	127	77	23	11		402
50 ,, 52	142	75	57	9	—		283
48 ,, 50	115	63	24	6	—		208
46 ,, 48	103	42	14	5	—		164
44 ,, 46	58	33	5	—	—		96
42 ,, 44	29	12	—	—	—		41
40 ,, 42	23	3	—	—	—		26
Total	1,000	1,000	1,000	1,000	1,000	—	5,000
Average	52·74	57·03	62·44	65·37	72·21	77·25*	—
Mean	52·0	56·0	60·0	66·0	72·0	—	—

* The weight of the girls of 13 years is the average of 337 factory girls *passed* by Dr. F. Ferguson, of Bolton. The average weight of 205 which he rejected was 63·25 lbs.

Directing our attention, in the first place, to the table of heights of boys (III), we find that the three lowest groups of each age-column contain a very small number of individuals, the numbers per thousand being at the age of 8 years, 11; at the age of 9 years, 11; at the age of 10 years, 19; at the age of 11 years, 15; at the age of 12 years, 15; and at the age of 13 years, 21. All these I propose to exclude as physically too short of stature for factory work. The fourth group from the bottom of each column consists of a larger number of individuals, and may be taken at the minimum standard of height for each age. This would give for the lowest stature for boys of 8 years of age, 42 inches; 9 years, 44 inches; 10 years, 46 inches; 11 years, 48 inches; 12 years, 49 inches; and for 13 years 50 inches. Proceeding next to the table of chest girths, I propose to reject the two lowest groups of each column as physically unfit for factory work, and the third group from the bottom will form the minimum standard of chest girth. The result would be for a child of 8 years a chest girth of 20½ inches; for 9 years, 21 inches; for 10 years, 21½ inches; for 11 years, 22 inches; for 12 years, 22½ inches; and for 13 years 23 inches; the increase being half an inch for each age. The determination of a minimum standard of weights cannot be made in the same regular manner. The weight table consists of groups of children differing from each other by 2 lbs.; but the rate of increase is greater in the higher than the lower years, and each age-column must for our present purpose be treated on its own merits. The numbers sufficiently indicate how this can be done. At the age of 8 years the two lowest groups, at 9 the three lowest groups, and in the remaining columns the four lowest groups must be rejected, and the result would be that a child of 8 years should not weigh less than 45 lbs.; one of 9 years, 49 lbs.; one of 10 years, 53 lbs.; one of 11 years, 57 lbs.; one of 12 years, 59 lbs. (61 lbs.?); and one of 13 years, 65 lbs. The relation which the standards bear to each other will be more easily seen and understood if arranged in the form of a table.

Minimum Standards of Height, Chest Girth, and Weight for Factory Children between the Ages of Eight and Fourteen Years.

Age.	Height.	Chest Girth.	Weight.	Development of Teeth.
	In.	In.	lbs.	
8	42	20½	45	Central incisors.
9	44	21	49	Lateral ,,
10	46	21½	53	First bicuspid.
11	48	22	57	Second ,,
12	49	22½	59(61?)	Canine from 12 to 12½ years.
13	50	23	65	Second molars from 12½ to 14 years.

There is a discrepancy in the weight for children of 12 years of age, which is only 2 lbs. heavier than the weight given for a child of 11 years, but 6 lbs. lighter than one of 13 years; it should probably be 61 lbs., the mean of 11 and 13 years. All the standards for 12 years of age are probably a little too low, as no doubt many of the bigger boys pass themselves off as 13 before they have really attained that age, in order to work full time. It must be understood that the heights given in the above tables are without shoes or clogs, the weights include the ordinary in-door dress and shoe or clogs, and the chest girths are the circumferences of the empty chest taken across the nipples and including the lower parts of the scapulæ.

These standards are for boys, but they may be used for girls with advantage. We see from Table IV that girls are about half an inch shorter in stature and from 2 to 3 lbs. lighter in weight than boys of similar ages (except at 13 years), but they are also physically weaker, and the effect of using the same standards for both sexes will be, that the girls will be a few months older than the boys when they begin to work, or the development will be more advanced.

I have intentionally fixed the standards at the lowest point of physical fitness for work, in order to include workshop as well as factory children, as it is probable that the various Acts will be consolidated, and the whole of the children put under medical inspection. The standards are probably fair ones for town children, but a little too low for those living in rural districts. They must not be supposed to indicate typical children according to the scale of proportions given in Table II, such a scale would require larger chest girths and greater weights for the heights.

On account of the large size of the following general tables (V to XIV), it has been found necessary to divide each of them into three portions, so that one table extends over three pages; the headings and the horizontal black lines sufficiently indicate the relation in which each portion stands to the other two. It is also necessary that the following explanations should be borne in mind in reference to:—

Age.—The ages of the boys in the Royal Military Asylum and the Royal Naval Hospital School, were obtained from certificates of birth, and are therefore correct. The ages of all the other children were obtained from the children themselves, after they had been instructed to ask their parents. As the agricultural and non-factory children had no inducement to misrepresent their ages, they are probably correct, but the ages of the factory children may be a little less than they are represented.

Height.—The heights in all cases were taken in the upright position, without shoes or clogs.

Chest Girth.—The chest girth of the Military Asylum and Naval School boys was taken in the manner employed in the examination of recruits for the army, by placing a measuring tape quite horizontally round the chest over the nipples, the arms hanging loosely by the sides. Before the measurement is determined, the recruit is made to count from one to ten to prevent any undue inflation of the chest. The chest girth of the factory and other children is half an inch less than the mean between the measurements taken at the lowest expiration and highest inspiration. The girls were measured over the dress, but to approximate them to the boys a uniform deduction of an inch has been made for the thickness of the dress.

Weight.—The weights of the Military Asylum and Naval Hospital boys were taken without the clothes, but to make them uniform with the other children 10 lbs. have been added for the weight of the clothes. The weights of the factory and other children were taken in the ordinary indoor school dress, and include the shoes and clogs.

Table XV, reduced from Quetelet,* gives some measurements of different parts of the body, which will be useful in determining the mean proportions of children of the factory ages.

Table XVI gives the results of some inquiries I made to ascertain the number of children to a family in the factory and other districts. The figures show that the families in factory towns consist of a smaller number of individuals than elsewhere. The highest percentage of children in factory towns is 3; in rural factory districts, 4; and in non-factory towns and agricultural districts, 5.

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* "Anthropométrie," 1870.

TABLE V.—*Boys, Age from Eight to Nine Years.*

HEIGHT.

Height in Inches.	Total Number of Observations.	Urban Population.						Rural Population.		
		Royal Military Asylum.	Factory Children Working in		Non-Factory Children Living in		Total Urban.	Factory Districts, Cotton and Woollen.	Agricultural Districts.	Total Rural.
			Cotton Mills.	Woollen Mills.	Factory Towns.	Country Towns.				
From—										
54 to 55	1	—	—	—	—	—	—	—	1	1
53 ,, 54	3	1	—	—	—	—	1	—	2	2
52 ,, 53	4	2	—	2	—	—	4	—	—	—
51 ,, 52	24	12	—	1	2	3	18	5	1	6
50 ,, 51	41	23	2	2	—	1	28	7	6	13
49 ,, 50	103	52	2	13	4	11	82	6	15	21
48 ,, 49	153	67	1	25	4	13	110	26	17	43
47 to 48*....	210	110	10	26	6	9	161	28	21	49
46 to 47	204	103	10	18	12	10	153	28	23	51
45 ,, 46	164	89	9	24	4	6	132	11	21	32
44 ,, 45	115	59	2	8	9	5	83	19	13	32
43 ,, 44	49	25	1	3	5	4	38	4	7	11
42 ,, 43	17	8	1	1	2	—	12	1	4	5
41 ,, 42	7	5	—	1	—	—	6	—	1	1
40 ,, 41	4	3	—	—	—	—	3	—	1	1
39 ,, 40	1	1	—	—	—	—	1	—	—	—
Total	1,100	560	38	124	48	62	832	135	133	268
Average	46·93	46·68	46·65	47·16	46·31	47·45	46·85	47·13	46·91	47·02
Mean	46·5	46·5	—	47·0	—	—	47·0	47·0	47·0	47·0

* Mean boy.

Table V—*Contd.*

Chest Girth.

Chest Girth in Inches.	Total Number of Observations.	Urban Population.					Rural Population.	
		Royal Military Asylum.	Factory Children Working in Cotton Mills.	Factory Children Working in Woollen Mills.	Non-Factory Children in Factory and Country Towns.	Total Urban.	Factory Districts, Cotton and Woollen.	Agricultural Districts.
25·5	4	4	—	—	—	4	—	—
25·0	17	14	1	—	2	17	—	—
24·5	23	19	—	1	2	22	—	1
24·0	65	51	1	1	7	60	—	5
23·5	83	46	5	12	7	70	—	13
23·0	151	89	5	21	19	134	—	17
22·5*	166	85	9	28	20	142	—	24
22·0	157	90	2	20	17	129	—	28
21·5	148	81	2	15	27	125	—	23
21·0	86	54	2	6	9	71	—	15
20·5	38	23	—	4	5	32	—	6
20·0	6	3	—	—	1	4	—	2
19·5	1	1	—	—	—	1	—	—
Total	945	560	27	108	116	811	109	134
Average	22·26	22·54	22·7	22·35	22·28	22·45	22·44	22·08
Mean	22·5	22·5	22·5	22·5	—	22·5	—	22·0

* Mean boy.

TABLE V—*Contd.*

WEIGHT.

Weight in Pounds Avoirdupois.	Total Number of Observations.	Urban Population.						Rural Population.		
		Royal Military Asylum.	Factory Children Working in		Non-Factory Children Living in		Total Urban.	Factory Districts, Cotton and Woollen.	Agricultural Districts.	Total Rural.
			Cotton Mills.	Woollen Mills.	Factory Towns.	Country Towns.				
72 to 80	5	2	—	1	—	—	3	2	—	2
70 ,, 72	10	6	—	1	—	—	7	1	2	3
68 ,, 70	18	12	—	2	—	—	14	—	4	4
66 ,, 68	22	14	1	2	—	—	17	2	3	5
64 ,, 66	39	30	1	1	1	1	34	3	2	5
62 ,, 64	62	43	2	3	4	3	55	3	4	7
60 ,, 62	91	58	4	7	—	5	74	5	12	17
58 ,, 60	133	81	2	18	3	6	110	16	7	23
56 ,, 58	151	84	2	13	7	13	119	19	13	32
54 to 56*....	180	84	3	29	5	15	136	19	25	44
52 to 54	141	69	11	22	7	4	103	10	18	28
50 ,, 52	92	42	3	13	5	6	69	6	17	23
48 ,, 50	58	20	2	10	7	3	42	6	10	16
46 ,, 48	46	9	6	8	6	3	32	8	6	14
44 ,, 46	26	3	1	4	7	1	16	2	8	10
42 ,, 44	10	1	1	1	2	1	6	2	2	4
40 ,, 42	2	2	—	—	—	—	2	—	—	—
Total	1,085	560	39	134	54	61	848	104	133	237
Average	55·0	57·27	53·74	54·5	52·22	55·25	54·74	56·0	54·53	55·26
Mean	55·0	56·0	—	54·0	—	—	55·0	56·0	—	55·0

* Mean boy.

TABLE VI.—*Boys, Age from Nine to Ten Years.*

HEIGHT.

Height in Inches.	Total Number of Observations.	Urban Population.						Rural Population.		
		Royal Military Asylum.	Factory Children Working in		Non-Factory Children Living in		Total Urban.	Factory Districts, Cotton and Woollen.	Agricultural Districts.	Total Rural.
			Cotton Mills.	Woollen Mills.	Factory Towns.	Country Towns.				
57 to 60	1	1	—	—	—	—	1	—	—	—
56 „ 57	2	1	—	—	1	—	2	—	—	—
55 „ 56	5	—	—	1	—	1	2	2	1	3
54 „ 55	14	8	—	—	—	2	10	2	2	4
53 „ 54	21	7	1	2	4	3	17	2	2	4
52 „ 53	90	30	6	9	10	9	64	13	13	26
51 „ 52	127	39	7	11	13	12	82	22	23	45
50 „ 51	192	77	14	14	16	20	141	34	17	51
49 „ 50	246	71	18	25	33	23	170	45	31	76
48 to 49*........	280	100	25	18	33	20	196	49	35	84
47 to 48	236	86	19	36	17	27	185	41	10	51
46 „ 47	155	54	13	22	14	7	110	31	14	45
45 „ 46	95	33	18	8	15	5	79	12	4	16
44 „ 45	31	10	3	3	5	3	24	6	1	7
43 „ 44	13	4	2	1	1	—	8	3	2	5
42 „ 43	2	—	—	—	1	—	1	—	1	1
41 „ 42	2	2	—	—	—	—	2	—	—	—
40 „ 41	1	1	—	—	—	—	1	—	—	—
Total	1,513	524	126	150	163	132	1,095	262	156	418
Average	49·01	48·67	48·3	48·62	48·69	49·25	48·7	49·22	49·43	49·32.
Mean	48·5	48·5	48·5	—	—	—	48·5	—	—	48·5

* Mean boy.

TABLE VI—*Contd.*

CHEST GIRTH.

Chest Girth in Inches.	Total Number of Observations.	Urban Population.					Rural Population.	
		Royal Military Asylum.	Factory Children Working in		Non-Factory Children Living in Factory and Country Towns.	Total Urban.	Factory Districts, Cotton and Woollen.	Agricul-tural Districts.
			Cotton Mills.	Woollen Mills.				
26·5	7	3	1	—	3	7	—	—
26·0	12	7	2	—	3	12	—	—
25·5	15	11	1	—	1	13	—	2
25·0	41	27	2	2	5	36	—	5
24·5	78	45	11	6	12	74	—	4
24·0	121	65	10	13	20	108	—	13
23·5	161	63	27	19	35	144	—	17
23·0*	201	80	19	32	42	173	—	28
22·5	184	74	20	35	29	158	—	26
22·0	144	87	5	15	20	127	—	17
21·5	75	34	5	9	12	60	—	15
21·0	42	24	2	3	8	37	—	5
20·5	12	4	1	1	3	9	—	3
20·0	5	—	1	—	4	5	—	—
Total	1,098	524	107	135	197	963	235	135
Average	23·0	23·14	23·13	22·85	23·04	23·1	22·92	22·79
Mean	23·0	23·0	—	—	—	23·0	—	23·0

* Mean boy.

TABLE VI—*Contd.*

WEIGHT.

Weight in Pounds Avoirdupois.	Total Number of Observations.	Urban Population.						Rural Population.		
		Royal Military Asylum.	Factory Children Working in		Non-Factory Children Living in		Total Urban.	Factory Districts, Cotton and Woollen.	Agricultural Districts.	Total Rural.
			Cotton Mills.	Woollen Mills.	Factory Towns.	Country Towns.				
From										
80 to 86	2	1	—	—	—	—	1	1	—	1
78 „ 80	7	5	—	—	—	—	5	—	2	2
76 „ 78	13	4	—	—	—	1	5	3	5	8
74 „ 76	20	9	—	1	—	3	13	5	2	7
72 „ 74	26	11	2	1	2	1	17	5	4	9
70 „ 72	44	21	2	1	6	3	33	4	7	11
68 „ 70	59	21	7	5	6	10	49	3	7	10
66 „ 68	103	41	7	11	9	11	79	14	10	24
64 „ 66	123	54	6	16	2	8	86	18	19	37
62 „ 64	153	74	8	14	11	11	118	21	14	35
60 to 62*....	193	84	21	23	17	7	152	24	17	41
58 to 60	179	63	13	26	10	15	127	27	25	52
56 „ 58	177	56	17	24	29	19	145	22	10	32
54 „ 56	147	33	24	20	24	15	116	21	10	31
52 „ 54	115	31	10	25	17	12	95	8	12	20
50 „ 52	59	11	11	9	12	7	50	4	5	9
48 „ 50	39	4	5	6	11	3	29	5	5	10
46 „ 48	16	—	2	1	7	1	11	3	2	5
44 „ 46	6	—	1	2	1	1	5	1	—	1
42 „ 44	5	1	—	—	4	—	5	—	—	—
Total	1,486	524	136	185	168	128	1,141	189	156	345
Average	60·12	61·63	58·15	58·98	57·25	59·34	59·07	60·77	61·6	61·18
Mean	60·0	60·0	—	—	—	—	60·0	—	—	60·0

* Mean boy.

Table VII.—*Boys, Age from Ten to Eleven Years.*

Height.

Height in Inches.	Total Number of Observations.	Urban Population.						Rural Population.			
		Royal Military Asylum.	Factory Children Working in		Non-Factory Children Living in		Total Urban.	Greenwich Hospital School.	Factory Districts, Cotton and Woollen.	Agricultural Districts.	Total Rural.
			Cotton Mills.	Woollen Mills.	Factory Towns.	Country Towns.					
58 to 59	4	1	—	—	—	—	1	1	—	2	3
57 „ 58	10	3	—	2	—	—	5	2	2	1	5
56 „ 57	9	1	—	1	—	3	5	—	2	2	4
55 „ 56	29	2	1	1	2	3	9	6	6	8	20
54 „ 55	55	13	1	6	5	7	32	11	5	7	23
53 „ 54	141	24	9	14	8	9	64	35	27	15	77
52 „ 53	249*	42	33	16	20	26	137	65	30	17	112
51 „ 52	299	60	33	22	24	28	167	63	43	26	132
50 to 51*	331	67	42	31	27	27	194	58	57	22	137
49 to 50	319	85	48	28	23	15	199	60	45	15	120
48 „ 49	247	79	43	21	11	12	166	34	30	17	81
47 „ 48	140	48	26	15	9	2	100	12	22	6	40
46 „ 47	74	30	13	4	5	3	55	7	9	3	19
45 „ 46	28	6	6	2	2	3	19	2	5	2	9
44 „ 45	3	—	1	—	1	—	2	—	1	—	1
43 „ 44	4	1	—	—	—	3	4	—	—	—	—
42 „ 43	1	—	—	—	1	—	1	—	—	—	—
Total	1,943	462	256	163	138	141	1,160	356	284	143	783
Average	50·6	49·8	49·85	50·58	50·51	51·03	50·35	51·04	50·22	51·33	50·86
Mean	50·5	49·5	49·5	50·5	50·5	—	50·0	51·0	50·5	—	50·5

* Mean boy.

TABLE VII—*Contd.*

CHEST GIRTH.

Chest Girth in Inches.	Total Number of Observa-tions.	Urban Population.					Rural Population.			
			Factory Children Working in							
		Royal Military Asylum.	Cotton Mills.	Wool-len Mills.	Non-Factory Children Living in Factory and Country Towns.	Total Urban.	Green-wich Hospital School.	Factory Dis-tricts, Cotton and Woollen.	Agricul-tural Districts.	Total Rural.
27·5	4	1	—	—	—	1	3	—	—	3
27·0	9	4	—	—	—	4	5	—	—	5
26·5	11	3	1	—	2	6	5	—	—	5
26·0	29	9	1	2	4	16	11	—	2	13
25·5	48	8	5	4	7	24	22	—	2	24
25·0	113	37	12	8	8	65	42	—	6	48
24·5	156	32	17	16	10	75	64	—	17	81
24·0	220	52	22	29	31	134	60	—	26	86
23·5*	196	39	27	26	26	118	60	—	18	78
23·0	208	73	22	24	26	145	41	—	22	63
22·5	191	87	21	19	15	142	31	—	18	49
22·0	113	64	12	11	12	99	5	—	9	14
21·5	54	36	3	5	4	48	3	—	3	6
21·0	28	16	3	3	1	23	1	—	4	5
20·5	4	1	2	—	1	4	—	—	—	—
Total	1,384	462	148	147	147	904	353	282	127	480
Average	23·52	23·01	23·44	23·43	23·48	23·31	24·08	23·66	23·41	23·71
Mean	23·5	22·5	23·5	—	—	23·0	—	—	—	24·0

* Mean boy.

TABLE VII—*Contd.*

WEIGHT.

Weight in Pounds.	Total Number of Observations.	Urban Population.						Rural Population.			
		Royal Military Asylum.	Factory Children Working in		Non-Factory Children Living in		Total Urban.	Greenwich Hospital School.	Factory Districts, Cotton and Woollen.	Agricultural Districts.	Total Rural.
			Cotton Mills.	Woollen Mills.	Factory Towns.	Country Towns.					
94 to 96	1	—	—	—	—	—	—	1	—	—	1
90 ,, 94	4	—	—	—	—	—	—	4	—	—	4
88 ,, 90	6	—	—	—	—	1	1	4	1	—	5
86 ,, 88	7	1	—	—	—	2	3	3	—	1	4
84 ,, 86	15	3	—	—	1	1	5	6	1	3	10
82 ,, 84	8	—	—	—	—	1	1	4	1	2	7
80 ,, 82	26	4	2	1	1	—	8	13	2	3	18
78 ,, 80	26	9	1	1	—	4	15	8	2	1	11
76 ,, 78	54	22	2	1	2	1	28	12	7	7	26
74 ,, 76	61	6	5	6	4	3	24	19	12	6	37
72 ,, 74	96	25	6	4	7	4	46	29	9	12	50
70 ,, 72	131	24	19	9	6	11	69	37	11	14	62
68 ,, 70	172	42	19	14	8	18	101	38	17	16	71
66 ,, 68	171	36	17	12	12	15	92	48	18	13	79
64 ,, 66	204	50	28	14	10	19	121	42	30	11	83
62 to 64*	224	67	24	22	18	13	144	39	27	14	80
60 to 62	207	63	18	27	18	13	139	25	26	17	68
58 ,, 60	152	42	26	20	8	8	104	13	25	10	48
56 ,, 58	127	34	22	16	20	10	102	5	15	5	25
54 ,, 56	85	22	19	10	8	8	67	1	11	6	18
52 ,, 54	51	9	14	2	14	4	43	1	6	1	8
50 ,, 52	18	2	6	4	2	1	15	—	2	1	3
48 ,, 50	13	—	7	1	—	3	11	—	2	—	2
46 ,, 48	6	—	3	—	1	1	5	—	1	—	1
44 ,, 46	3	1	2	—	—	—	3	—	—	—	—
Total	1,875	462	247	164	140	141	1,154	352	226	143	721
Average	65·03	64·53	60·19	62·91	63·11	64·81	63·11	69·36	64·45	67·03	66·95
Mean	63·0	63·0	—	—	—	—	63·0	67·0	64·0	—	65·0

* Mean boy.

TABLE VIII.—*Boys, Age from Eleven to Twelve Years.*

HEIGHT.

Height in Inches.	Total Number of Observations.	Urban Population.						Rural Population.			
		Royal Military Asylum.	Factory Children Working in		Non-Factory Children Living in		Total Urban.	Greenwich Hospital School.	Factory Districts, Cotton and Woollen.	Agricultural Districts.	Total Rural.
			Cotton Mills.	Woollen Mills.	Factory Towns.	Country Towns.					
60 to 61	1	—	—	—	1	—	1	—	—	—	—
59 ,, 60	3	1	—	—	—	2	3	—	—	—	—
58 ,, 59	7	—	—	—	—	—	—	2	2	3	7
57 ,, 58	22	3	3	2	1	3	12	2	5	3	10
56 ,, 57	32	9	2	1	1	3	16	1	10	5	16
55 ,, 56	82	13	13	4	5	10	45	9	13	15	37
54 ,, 55	145	28	6	14	11	13	72	17	36	20	73
53 ,, 54	188	42	21	17	17	9	106	27	34	21	82
52 to 53*	261	64	37	22	20	16	159	26	52	24	102
51 to 52	239	58	35	22	12	16	143	34	45	17	96
50 ,, 51	239	78	32	29	9	8	156	19	46	18	83
49 ,, 50	171	68	23	17	6	3	120	14	31	6	51
48 ,, 49	90	43	11	9	1	4	67	8	11	4	23
47 ,, 48	57	28	8	5	3	1	48	3	5	1	9
46 ,, 47	19	3	4	3	—	—	11	4	3	1	8
45 ,, 46	3	2	1	—	—	—	3	—	—	—	—
44 ,, 45	—	—	—	—	—	—	—	—	—	—	—
Total	1,559	440	196	145	87	94	962	166	293	138	597
Average	52·13	51·06	51·59	51·54	52·54	52·67	51·88	52·07	52·17	52·94	52·39
Mean	52·0	50·5	52·0	50·5	52·5	52·0	52·0	51·5	52·0	52·5	52·0

* Mean boy.

TABLE VIII—*Contd.*

CHEST GIRTH.

Chest Girth in Inches.	Total Number of Observations.	Urban Population.					Rural Population.			
		Royal Military Asylum.	Factory Children Working in		Factory and Non-Factory Towns.	Total Urban.	Greenwich Hospital School.	Factory Districts, Cotton and Woollen.	Agricultural Districts.	Total Rural.
			Cotton Mills.	Woollen Mills.						
29·0	1	—	—	—	—	—	1	—	—	1
28·5	1	1	—	—	—	1	—	—	—	—
28·0	3	1	—	—	—	1	1	—	1	2
27·5	6	3	—	—	—	3	3	—	—	3
27·0	10	5	—	—	1	6	2	—	2	4
26·5	18	3	3	1	2	9	5	—	4	9
26·0	43	18	1	2	5	26	11	—	6	17
25·5	74	17	9	3	12	41	25	—	8	33
25·0	119	34	11	11	22	78	30	—	11	41
24·5	123	31	18	14	20	83	23	—	17	40
24·0*	200	69	27	27	25	148	32	—	20	52
23·5	154	60	17	26	15	118	16	—	20	36
23·0	168	86	17	24	19	146	7	—	15	22
22·5	99	55	10	10	11	86	4	—	9	13
22·0	63	43	4	7	6	60	2	—	1	3
21·5	16	9	3	—	2	14	1	—	1	2
21·0	4	2	—	—	2	4	—	—	—	—
20·5	4	3	1	—	—	4	—	—	—	—
Total	1,105	440	121	125	142	828	163	302	114	277
Average	24·1	23·62	23·86	23·7	24·01	23·8	24·68	24·52	24·14	24.41
Mean	24·0	23·0	24·0	24·0	24·0	24·0	24·0	—	24·0	24·0

* Mean boy.

TABLE VIII—*Contd.*

WEIGHT.

Weight in Pounds Avoirdupois.	Total Number of Observations.	Urban Population.						Rural Population.			
		Royal Military Asylum.	Factory Children Working in		Non-Factory Children Living in		Total Urban.	Greenwich Hospital School.	Factory Districts, Cotton and Woollen.	Agricultural Districts.	Total Rural.
			Cotton Mills.	Woollen Mills.	Factory Towns.	Country Towns.					
96 to 98	1	—	—	—	—	—	—	1	—	—	1
94 „ 96	6	—	2	—	—	—	2	2	1	1	4
92 „ 94	2	—	—	—	—	—	—	—	—	2	2
90 „ 92	7	1	—	—	—	1	2	1	1	3	5
88 „ 90	13	1	2	—	—	1	4	3	3	3	9
86 „ 88	18	6	1	—	1	2	10	6	—	2	8
84 „ 86	21	7	1	—	1	—	9	6	3	3	12
82 „ 84	25	4	5	1	1	1	12	7	1	5	13
80 „ 82	60	13	10	2	2	7	34	11	7	8	26
78 „ 80	58	11	5	2	4	2	24	11	15	8	34
76 „ 78	87	24	7	7	5	4	47	15	14	12	40
74 „ 76	106	28	13	10	6	6	63	13	21	9	43
72 „ 74	112	34	7	5	4	10	60	13	24	15	52
70 „ 72	164	45	16	13	7	9	90	27	32	15	74
68 to 70*	168	46	21	23	8	11	109	15	33	11	59
66 to 68	141	47	16	16	14	3	96	14	19	12	45
64 „ 66	135	42	14	21	8	12	97	6	22	10	38
62 „ 64	108	43	20	10	7	7	87	3	15	3	21
60 „ 62	117	40	24	16	5	4	89	4	18	6	28
58 „ 60	65	19	11	9	5	5	49	1	10	5	16
56 „ 58	42	22	2	5	1	1	31	4	5	2	11
54 „ 56	33	6	3	10	—	5	24	2	4	3	9
52 „ 54	9	—	6	—	1	2	9	—	—	—	—
50 „ 52	10	1	1	3	1	1	7	—	3	—	3
48 „ 50	4	—	1	3	—	—	4	—	—	—	—
46 „ 48	1	—	1	—	—	—	1	—	—	—	—
Total....	1,513	440	189	156	81	94	960	165	250	138	553
Average	70·04	68·32	67·72	65·64	68·85	69·03	67·91	74·1	69·65	72·78	72·18
Mean....	69·0	67·0	—	68·0	67·0	—	68·0	71·0	69·0	71·0	71·0

* Mean boy.

Table IX.—*Boys, Age from Twelve to Thirteen Years.*

Height.

Height in Inches.	Total Number of Observations.	Urban Population.						Rural Population.			
		Royal Military Asylum.	Factory Children Working in		Non-Factory Children Living in		Total Urban.	Greenwich Hospital School.	Factory Districts, Cotton and Woollen.	Agricultural Districts.	Total Rural.
			Cotton Mills.	Woollen Mills.	Factory Towns.	Country Towns.					
From—											
60 to 61	3	—	—	—	1	1	2	—	1	—	1
59 „ 60	7	1	—	—	1	1	3	—	1	3	4
58 „ 59	21	2	—	1	2	7	12	1	6	2	9
57 „ 58	35	3	6	3	1	4	17	2	9	7	18
56 „ 57	71	9	7	5	8	5	34	2	18	17	37
55 „ 56	126	20	20	22	6	14	82	5	20	19	44
54 „ 55	169	44	23	31	7	9	114	—	44	11	55
53 „ 54	187	46	18	31	9	15	119	1	55	12	68
52 to 53*	216	58	33	25	10	16	142	5	56	13	74
51 to 52	147	60	22	15	6	13	116	2	25	4	31
50 „ 51	132	51	25	10	4	6	96	1	27	8	36
49 „ 50	46	25	9	3	—	1	38	1	5	2	8
48 „ 49	37	17	8	3	2	1	31	—	4	2	6
47 „ 48	11	4	3	1	1	—	9	—	2	—	2
46 „ 47	5	3	1	—	—	—	4	—	1	—	1
45 „ 46	2	1	—	—	—	—	1	—	1	—	1
Total	1,215	344	175	150	58	93	820	20	275	100	395
Average	53·8	52·09	53·3	53·42	53·91	54·0	53·37	54·15	53·36	55·19	54·23
Mean	52·5	52·0	52·5	53·5	—	—	52·5	—	—	—	52·5

* Mean boy.

Table IX—*Contd.*

Chest Girth.

Chest Girth in Inches.	Total Number of Observations.	Urban Population.					Rural Population.			
		Royal Military Asylum.	Factory Children Working in		Non-Factory Children Living in Factory and Country Towns.	Total Urban.	Greenwich Hospital School.	Factory Districts, Cotton and Woollen.	Agricultural Districts.	Total Rural.
			Cotton Mills.	Woollen Mills.						
28·0	1	1	—	—	—	1	—	—	—	—
27·5	2	—	—	—	—	—	2	—	—	2
27·0	8	1	3	—	1	5	2	—	1	3
26·5	20	7	5	3	3	18	1	—	1	2
26·0	39	11	10	8	5	34	3	—	3	5
25·5	74	20	13	17	12	62	6	—	9	12
25·0	122	38	18	30	20	106	1	—	10	16
24·5	140	47	20	28	20	115	2	—	24	25
24·0*........	164	63	28	26	31	148	1	—	14	16
23·5	107	57	13	10	14	94	1	—	12	13
23·0	87	47	11	9	8	75	—	—	12	12
22·5	55	35	2	4	7	48	—	—	7	7
22·0	17	12	—	1	1	14	—	—	3	3
21·5	5	3	1	—	—	4	—	—	1	1
21·0	1	1	—	—	—	1	—	—	—	—
20·5	—	—	—	—	—	—	—	—	—	—
20·0	1	1	—	—	—	1	—	—	—	—
Total	843	344	124	136	122	726	20	264	97	117
Average....	24·71	24·01	24·53	24·51	24·34	24·43	25·5	24·71	24·6	25.0
Mean........	24·0	24·0	24·0	24·5	24·0	24·0	—	—	24·5	24·5

* Mean boy.

Table IX—*Contd.*

Weight.

Weight in Pounds.	Total Number of Observations.	Urban Population.						Rural Population.			
		Royal Military Asylum.	Factory Children Working in		Non-Factory Children Living in		Total Urban.	Greenwich Hospital School.	Factory Districts, Cotton and Woollen.	Agricultural Districts.	Total Rural.
			Cotton Mills.	Woollen Mills.	Factory Towns.	Country Towns.					
From											
94 to 96	7	1	—	—	—	1	2	1	2	2	5
92 „ 94	9	—	1	—	—	2	3	—	4	2	6
90 „ 92	17	5	—	1	1	2	9	1	3	4	8
88 „ 90	14	3	—	—	—	—	3	1	5	5	11
86 „ 88	29	9	4	2	2	1	18	1	5	5	11
84 „ 86	29	6	4	3	—	2	15	2	5	7	14
82 „ 84	35	12	1	6	3	2	24	1	4	6	11
80 „ 82	58	14	6	7	4	8	39	2	12	5	19
78 „ 80	84	27	10	7	4	8	56	1	16	11	28
76 „ 78	82	25	9	8	3	4	49	1	23	9	33
74 „ 76	130	38	21	23	7	9	98	1	23	8	32
72 to 74*	126	33	21	16	3	7	80	1	36	9	46
70 to 72	123	34	15	17	7	14	87	3	28	5	36
68 „ 70	112	32	19	11	3	13	78	4	25	5	34
66 „ 68	93	30	10	17	5	5	67	—	19	7	26
64 „ 66	87	32	17	9	4	8	70	—	14	3	17
62 „ 64	73	24	15	14	1	4	59	—	13	1	14
60 „ 62	27	8	7	6	1	1	23	—	3	1	4
58 „ 60	20	5	6	2	3	1	17	—	2	1	3
56 „ 58	17	4	3	3	1	1	14	—	2	3	5
54 „ 56	6	—	3	—	—	—	4	—	1	1	2
52 „ 54	5	—	3	—	1	—	4	—	1	—	1
50 „ 52	3	1	2	—	—	—	3	—	—	—	—
Total	1,175	344	167	152	53	93	809	20	246	100	366
Average	73·87	72·26	69·76	71·38	72·44	73·43	71·85	77·97	72·44	77·28	75·9
Mean	74·0	—	—	—	—	—	74·0	—	73·0	—	73·0

* Mean boy.

TABLE X.—*Boys, Age from Thirteen to Fourteen Years.*

HEIGHT.

Height in Inches.	Total Number of Observations.	Urban Population.			Rural Population.		
		Royal Military Asylum.	Non-Factory Children Living in Country Towns.	Total Urban.	Greenwich Hospital School.	Agricultural Districts.	Total Rural.
62 to 63	2	1	—	1	2	—	2
61 ,, 62	3	—	—	—	3	—	3
60 ,, 61	12	3	—	3	9	—	9
59 ,, 60	25	9	—	9	16	—	16
58 ,, 59	20	7	—	7	12	1	13
57 ,, 58	58	19	3	22	35	1	36
56 ,, 57	112	38	3	41	67	4	71
55 ,, 56	108	38	2	40	68	—	68
54 to 55*....	135	57	—	57	76	2	79
53 to 54	101	54	3	57	43	1	44
52 ,, 53	73	39	1	40	33	—	33
51 ,, 52	40	20	1	21	19	—	19
50 ,, 51	32	26	—	26	6	—	6
49 ,, 50	9	6	2	8	1	—	1
48 ,, 49	5	2	—	2	3	—	3
47 ,, 48	1	1	—	1	—	—	—
46 ,, 47	1	1	—	1	—	—	—
Total	738	321	15	336	393	9	402
Average	54·95	54·11	54·37	54·24	55·3	56·05	55·67
Mean	54·5	54·5	—	54·0	55·0	—	54·5

* Mean boy.

TABLE X—*Contd.*

CHEST GIRTH.

Chest Girth in Inches.	Total Number of Observations.	Urban Population.				Rural Population.		
		Royal Military Asylum.	Factory Children Working in Cotton Mills.	Factory and Non-Factory Towns.	Total Urban.	Greenwich Hospital School.	Agricultural Districts.	Total Rural.
31·0	1	—	—	—	—	1	—	1
30·5	—	—	—	—	—	—	—	—
30·0	3	—	—	—	—	3	—	3
29·5	5	—	—	1	1	4	—	4
29·0	10	—	—	—	—	10	—	10
28·5	19	1	—	—	1	18	—	18
28·0	26	—	—	2	2	24	—	24
27·5	46	3	—	1	4	42	—	42
27·0	52	9	1	1	11	41	—	41
26·5	91	12	—	1	13	77	1	78
26·0	99	28	2	3	33	64	2	66
25·5*	116	48	—	—	48	66	2	68
25·0	83	49	2	3	52	29	2	31
24·5	75	56	5	2	63	8	4	12
24·0	58	50	2	2	54	4	—	4
23·5	41	37	1	2	40	1	—	1
23·0	23	19	2	2	23	—	—	—
22·5	7	6	—	1	7	—	—	—
22·0	2	2	—	—	2	—	—	—
21·5	1	1	—	—	1	—	—	—
Total	758	321	15	21	357	390	11	401
Average	25·54	24·79	24·6	25·33	24·9	26·67	25·72	26·19
Mean	25·5	24·5	—	—	24·5	26·5	—	26·5

* Mean boy.

TABLE X—*Contd.*

WEIGHT.

Weight in Pounds Avoirdupois.	Total Number of Observations.	Urban Population.					Rural Population.			
		Royal Military Asylum.	Factory Children Working in Cotton Mills.	Non-Factory Children Living in		Total Urban.	Greenwich Hospital School.	Factory Districts, Cotton and Woollen.	Agricultural Districts.	Total Rural.
				Factory Towns.	Country Towns.					
108 to 114	2	—	—	—	—	—	2	—	—	2
102 ,, 108	5	1	—	—	—	1	4	—	—	4
100 ,, 102	7	4	—	—	—	4	3	—	—	3
98 ,, 100	8	4	—	—	—	4	4	—	—	4
96 ,, 98	7	4	—	—	—	4	3	—	—	3
94 ,, 96	17	3	—	1	1	5	12	—	—	12
92 ,, 94	16	5	—	—	—	5	10	—	1	11
90 ,, 92	18	6	—	1	1	8	10	—	—	10
88 ,, 90	32	12	—	—	—	12	19	—	1	20
86 ,, 88	58	30	—	—	1	31	26	—	1	27
84 ,, 86	45	12	—	1	2	15	28	1	1	30
82 ,, 84	72	27	—	—	1	28	38	4	2	44
80 to 82*....	71	34	1	1	—	36	35	—	—	35
78 to 80	57	26	1	2	1	30	24	2	1	27
76 ,, 78	52	24	—	1	—	25	26	—	1	27
74 ,, 76	50	26	1	—	—	27	22	1	—	23
72 ,, 74	47	26	1	—	—	27	19	—	1	20
70 ,, 72	40	24	2	—	2	28	12	—	—	12
68 ,, 70	33	24	—	—	2	26	5	2	—	7
66 ,, 68	20	12	1	—	1	14	5	1	—	6
64 ,, 66	15	11	1	—	2	14	1	—	—	1
62 ,, 64	4	2	1	—	—	3	—	1	—	1
60 ,, 62	2	2	—	—	—	2	—	—	—	—
56 ,, 60	5	2	2	—	1	5	—	—	—	—
Total	683	321	11	7	15	355	307	12	9	328
Average	78·55	78·46	70·31	84·5	76·3	77·39	82·64	73·7	82·83	79·72
Mean	80·0	80·0	—	—	—	80·0	82·0	—	—	82·0

* Mean boy.

TABLE XI.—*Girls, Age from Eight to Nine Years.*

HEIGHT.

Height in Inches.	Total Number of Observations.	Urban Population.				Rural Population.	
		Factory Children Working in		Non-Factory Children Living in Factory and Country Towns.	Total Urban.	Factory Districts, Cotton and Woollen.	Agricultural Districts.
		Cotton Mills.	Woollen Mills.				
From—							
52 to 53....	1	—	—	—	—	—	1
51 „ 52....	2	—	—	1	1	—	1
50 „ 51....	10	—	2	2	4	—	6
49 „ 50....	22	—	8	5	13	—	9
48 „ 49....	38	2	16	8	26	—	12
47 „ 48....	65	5	24	17	46	—	19
46 to 47*	64	5	18	29	52	—	12
45 to 46....	50	2	20	11	33	—	17
44 „ 45....	45	1	9	23	33	—	12
43 „ 44....	18	1	6	9	16	—	2
42 „ 43....	4	—	1	3	4	—	—
41 „ 42....	3	1	—	2	3	—	—
40 „ 41....	2	—	—	2	2	—	—
Total	324	17	104	112	233	95	91
Average	46·48	46·32	46·75	46·0	46·27	46·28	47·13
Mean	46·5	—	—	46·0	46·5	—	47·0

* Mean girl.

TABLE XI—*Contd.*

CHEST GIRTH.

Chest Girth in Inches.	Total Number of Observations.	Urban Population.				Rural Population.	
		Factory Children Working in		Non-Factory Children Living in Factory and Country Towns.	Total Urban.	Factory Districts, Cotton and Woollen.	Agricultural Districts.
		Cotton Mills.	Woollen Mills.				
25·0	1	—	1	—	1	—	—
24·5	9	3	4	2	9	—	—
24·0	6	1	2	1	4	—	2
23·5	35	3	8	15	26	—	9
23·0	33	1	15	12	28	—	5
22·5*	71	4	18	31	53	—	18
22·0	41	1	15	9	25	—	16
21·5	59	2	10	25	37	—	22
21·0	30	—	10	12	22	—	8
20·5	26	1	5	12	18	—	8
20·0	14	—	2	4	6	—	8
Total	325	16	90	123	229	95	96
Average	22·27	22·9	22·29	22·05	22·14	22·52	21·83
Mean	22·5	—	22·5	—	22·5	—	—

* Mean girl.

TABLE XI—*Contd.*

WEIGHT.

Weight in Pounds Avoirdupois.	Total Number of Observations.	Urban Population.				Rural Population.	
		Factory Children Working in		Non-Factory Children Living in Factory and Country Towns.	Total Urban.	Factory Districts, Cotton and Woollen.	Agricultural Districts.
		Cotton Mills.	Woollen Mills.				
From—							
70 to 72....	2	—	1	—	1	—	1
68 „ 70....	—	—	—	—	—	—	—
66 „ 68....	2	—	1	—	1	—	1
64 „ 66....	2	—	—	1	1	—	1
62 „ 64....	6	1	1	1	3	—	3
60 „ 62....	16	—	6	3	9	—	7
58 „ 60....	16	2	5	5	12	—	4
56 „ 58....	36	—	9	9	18	—	18
54 „ 56....	48	3	16	9	28	—	20
52 to 54*	57	5	16	18	39	—	18
50 to 52....	49	1	17	14	32	—	17
48 „ 50....	40	1	14	19	34	—	6
46 „ 48....	36	2	12	16	30	—	6
44 „ 46....	20	1	8	7	16	—	4
42 „ 44....	10	—	—	7	7	—	3
40 „ 42....	8	—	—	6	6	—	2
Total	348	16	106	115	237	95	111
Average	52·74	52·5	51·63	50·49	51·54	52·4	53·95
Mean	53·0	—	—	—	52·0	—	54·0

* Mean girl.

TABLE XII.—*Girls, Age from Nine to Ten Years.*

HEIGHT.

Height in Inches.	Total Number of Observations.	Urban Population.				Rural Population.	
		Factory Children Working in		Non-Factory Children, Living in Factory and Country Towns.	Total Urban.	Factory Districts, Cotton and Woollen.	Agricultural Districts.
		Cotton Mills.	Woollen Mills.				
From—							
57 to 58....	1	1	—	—	1	—	—
56 „ 57....	—	—	—	—	—	—	—
55 „ 56....	4	1	—	1	2	—	2
54 „ 55....	1	—	—	1	1	—	—
53 „ 54....	8	1	1	4	6	—	2
52 „ 53....	25	3	5	11	19	—	6
51 „ 52....	41	3	7	20	30	—	11
50 „ 51....	73	16	14	12	52	—	21
49 „ 50....	104	26	23	34	83	—	21
48 to 49*	114	27	30	36	93	—	21
47 to 48....	110	23	27	42	92	—	18
46 „ 47....	82	22	21	29	72	—	10
45 „ 46....	49	17	8	17	42	—	7
44 „ 45....	24	3	9	7	19	—	5
43 „ 44....	7	—	3	3	6	—	1
42 „ 43....	5	1	1	1	3	—	2
Total	648	144	149	228	521	216	127
Average	48·44	48·31	48·14	48·55	48·39	48·14	48·87
Mean	48·0	48·0	48·0	48·0	48·0	—	48·5

* Mean girl.

TABLE XII—*Contd.*

CHEST GIRTH.

Chest Girth in Inches.	Total Number of Observations.	Urban Population.				Rural Population.	
		Factory Children Working in		Non-Factory Children Living in Factory and Country Towns.	Total Urban.	Factory Districts, Cotton and Woollen.	Agricultural Districts.
		Cotton Mills.	Woollen Mills.				
27·0	1	—	—	1	1	—	—
26·5	1	—	—	1	1	—	—
26·0	3	1	—	2	3	—	—
25·5	9	3	2	4	9	—	—
25·0	8	4	—	2	6	—	2
24·5	28	10	2	11	23	—	5
24·0	36	12	6	12	30	—	6
23·5	67	17	18	22	57	—	10
23·0	69	16	23	17	56	—	13
22·5*	99	17	18	46	81	—	18
22·0	78	18	18	22	58	—	20
21·5	59	7	18	16	41	—	18
21·0	34	4	5	9	18	—	16
20·5	21	1	4	8	13	—	8
20·0	12	—	—	6	6	—	6
Total	525	110	114	179	403	216	122
Average	22·57	23·31	22·55	22·67	22·84	22·7	22·3
Mean	22·5	—	23·0	22·5	22·5	—	22·0

* Mean girl.

TABLE XII—*Contd.*

WEIGHT.

Weight in Pounds Avoirdupois.	Total Number of Observa-tions.	Urban Population.				Rural Population.	
		Factory Children Working in		Non-Factory Children Living in Factory and Country Towns.	Total Urban.	Factory Districts, Cotton and Woollen.	Agricul-tural Districts.
		Cotton Mills.	Woollen Mills.				
From—							
78 to 84....	1	—	—	1	1	—	—
76 ,, 78....	5	1	2	—	3	—	2
74 ,, 76....	2	1	—	1	2	—	—
72 ,, 74....	9	—	2	2	4	—	5
70 ,, 72....	6	1	1	2	4	—	2
68 ,, 70....	12	1	—	6	7	—	5
66 ,, 68....	12	3	3	2	8	—	4
64 ,, 66....	41	5	4	16	25	—	16
62 ,, 64....	36	2	11	12	25	—	11
60 ,, 62....	69	13	15	15	43	—	26
58 ,, 60....	61	15	19	15	49	—	12
56 to 58*	86	25	16	29	70	—	16
54 to 56....	85	25	21	25	71	—	14
52 ,, 54....	85	17	21	29	67	—	18
50 ,, 52....	50	10	8	24	42	—	8
48 ,, 50....	42	8	10	15	33	—	9
46 ,, 48....	28	7	5	12	24	—	4
44 ,, 46....	22	3	10	7	20	—	2
42 ,, 44....	8	—	—	4	4	—	4
40 ,, 42....	2	—	—	1	1	—	1
Total	669	137	156	217	510	216	159
Average	57·03	55·87	55·17	56·13	55·72	56·33	58·38
Mean	56·0	55·0	55·0	56·0	56·0	—	59·0

* Mean girl.

TABLE XIII.—*Girls, Age from Ten to Eleven Years.*

HEIGHT.

Height in Inches.	Total Number of Observations.	Urban Population.				Rural Population.	
		Factory Children Working in		Non-Factory Children Living in Factory and Country Towns.	Total Urban.	Factory Districts, Cotton and Woollen.	Agricultural Districts.
		Cotton Mills.	Woollen Mills.				
From							
57 to 58....	2	—	1	—	1	—	1
56 ,, 57....	3	2	1	—	3	—	—
55 ,, 56....	6	3	2	—	5	—	1
54 ,, 55....	18	4	2	7	13	—	5
53 ,, 54....	30	7	7	8	22	—	8
52 ,, 53....	50	16	15	8	39	—	11
51 ,, 52....	85	24	20	19	63	—	12
50 ,, 51....	121	34	31	42	107	—	14
49 to 50*	117	39	36	21	96	—	21
48 to 49....	101	29	33	22	84	—	17
47 ,, 48....	68	22	14	17	53	—	15
46 ,, 47....	55	16	18	9	43	—	12
45 ,, 46....	12	4	5	2	11	—	1
44 ,, 45....	7	1	3	2	6	—	1
43 ,, 44....	3	—	1	2	3	—	—
Total	668	201	189	159	549	279	119
Average	49·87	50·33	49·63	49·85	49·91	49·76	49·91
Mean	50·0	49·5	49·5	50·0	50·0	—	49·5

* Mean girl.

TABLE XIII—*Contd.*

CHEST GIRTH.

Chest Girth in Inches.	Total Number of Observations.	Urban Population.				Rural Population.	
		Factory Children Working in		Non-Factory Children, Living in Factory and Country Towns.	Total Urban.	Factory Districts, Cotton and Woollen.	Agricultural Districts.
		Cotton Mills.	Woollen Mills.				
27·5	1	—	—	1	1	—	—
27·0	4	2	—	2	4	—	—
26·5	8	3	1	4	8	—	—
26·0	9	6	2	1	9	—	—
25·5	23	9	2	8	19	—	4
25·0	25	17	2	6	25	—	—
24·5	44	17	10	11	38	—	6
24·0	46	22	7	9	38	—	8
23·5*	89	20	24	26	70	—	19
23·0	74	15	24	24	63	—	11
22·5	100	14	27	33	74	—	26
22·0	44	4	18	9	31	—	13
21·5	39	4	13	9	26	—	13
21·0	12	2	3	2	7	—	5
20·5	5	—	1	—	1	—	4
Total	523	135	134	145	414	279	109
Average	23·2	23·76	22·94	23·39	23·3	23·7	22·73
Mean	23·5	24·0	—	23·5	23·5	—	22·5

* Mean girl.

Table XIII—*Contd.*

Weight.

Weight in Pounds Avoirdupois.	Total Number of Observations.	Urban Population.				Rural Population.	
		Factory Children Working in		Non-Factory Children Living in Factory and Country Towns.	Total Urban.	Factory Districts, Cotton and Woollen.	Agricultural Districts.
		Cotton Mills.	Woollen Mills.				
From							
80 to 90....	9	3	1	2	6	—	3
78 ,, 80....	4	1	—	2	3	—	1
76 ,, 78....	2	1	—	—	1	—	1
74 ,, 76....	9	2	1	1	4	—	5
72 ,, 74....	16	4	6	1	11	—	5
70 ,, 72....	21	4	5	3	12	—	9
68 ,, 70....	37	6	13	7	26	—	11
66 ,, 68....	39	11	13	8	32	—	7
64 ,, 66....	69	20	19	15	45	—	15
62 ,, 64—	62	21	13	15	49	—	13
60 to 62*	69	24	18	17	59	—	10
58 to 60....	63	14	18	18	50	—	13
56 ,, 58....	80	18	26	20	64	—	16
54 ,, 56....	64	22	16	15	53	—	11
52 ,, 54....	51	13	10	21	44	—	7
50 ,, 52....	38	12	12	6	30	—	8
48 ,, 50....	16	2	6	4	12	—	4
46 ,, 48....	9	1	6	1	8	—	1
44 ,, 46....	3	—	1	1	2	—	1
Total	661	179	184	157	520	279	141
Average....	62·44	60·59	60·14	59·75	60·16	61·37	62·28
Mean........	61·0	61·0	—	—	61·0	—	61·0

* Mean girl.

TABLE XIV.—*Girls, Age from Eleven to Twelve Years.*

HEIGHT.

Height in Inches.	Total Number of Observations.	Urban Population.				Rural Population.	
		Factory Children Working in		Non-Factory Children Living in Factory and Country Towns.	Total Urban.	Factory Districts, Cotton and Woollen.	Agricultural Districts.
		Cotton Mills.	Woollen Mills.				
From							
59 to 60....	1	—	—	—	—	—	1
58 „ 59....	4	1	2	—	3	—	1
57 „ 58 ...	4	—	1	1	2	—	2
56 „ 57....	17	5	2	7	14	—	3
55 „ 56....	24	9	8	4	21	—	3
54 „ 55....	24	—	5	11	16	—	8
53 „ 54....	58	18	14	15	47	—	11
52 „ 53....	85	20	23	20	63	—	22
51 to 52*	91	41	22	11	74	—	17
50 to 51....	80	31	20	23	74	—	6
49 „ 50....	61	27	20	6	53	—	8
48 „ 49....	39	15	14	6	35	—	4
47 „ 48....	18	3	10	4	17	—	1
46 „ 47....	8	3	2	3	8	—	—
45 „ 46....	4	1	1	1	3	—	1
Total	518	174	144	112	430	275	88
Average....	51·74	51·21	51·29	51·92	51·58	51·67	52·16
Mean	51·5	51·0	51·5	50·5	51·5	—	52·0

* Mean girl.

Table XIV—*Contd.*

Chest Girth.

Chest Girth in Inches.	Total Number of Observations.	Urban Population.				Rural Population.	
		Factory Children Working in		Non-Factory Children Living in Factory and Country Towns.	Total Urban.	Factory Districts, Cotton and Woollen.	Agricultural Districts.
		Cotton Mills.	Woollen Mills.				
27·5	6	—	1	4	5	—	1
27·0	7	4	—	3	7	—	—
26·5	12	6	1	5	12	—	—
26·0	29	12	3	9	24	—	5
25·5	34	13	8	7	28	—	6
25·0	44	21	15	5	41	—	3
24·5	60	22	11	17	50	—	10
24·0*	67	19	20	15	54	—	13
23·5	62	17	18	15	50	—	12
23·0	46	8	18	13	39	—	7
22·5	51	7	18	10	35	—	16
22·0	21	—	12	3	15	—	6
21·5	13	—	4	4	8	—	5
21·0	3	—	2	—	2	—	1
Total	456	130	131	110	371	275	85
Average....	23·84	24·33	23·61	24·23	24·05	23·95	23·63
Mean........	24·0	24·5	24·0	24·5	24·0	—	24·0

* Mean girl.

Table XIV—*Contd.*

Weight.

Weight in Pounds Avoirdupois.	Total Number of Observations.	Urban Population.				Rural Population.	
		Factory Children Working in		Non-Factory Children Living in Factory and Country Towns.	Total Urban.	Factory Districts, Cotton and Woollen.	Agricultural Districts.
		Cotton Mills.	Woollen Mills.				
From							
92 to 98....	3	1	—	—	1	—	2
90 ,, 92....	1	—	1	—	1	—	—
88 ,, 90....	2	—	1	—	1	—	1
86 ,, 88....	2	—	1	—	1	—	1
84 ,, 86....	3	—	—	2	2	—	1
82 ,, 84....	6	3	—	1	4	—	2
80 ,, 82....	15	4	2	5	11	—	4
78 ,, 80....	18	4	5	2	11	—	7
76 ,, 78....	16	4	6	2	12	—	4
74 ,, 76....	28	10	4	10	24	—	4
72 ,, 74....	27	8	10	4	22	—	5
70 ,, 72....	46	13	7	16	36	—	10
68 ,, 70....	41	10	13	11	34	—	7
66 to 68*	55	25	13	10	48	—	7
64 to 66....	46	14	13	8	35	—	11
62 ,, 64....	52	16	21	8	45	—	7
60 ,, 62....	54	18	15	12	45	—	9
58 ,, 60....	46	16	10	12	38	—	8
56 ,, 58....	33	20	8	4	32	—	1
54 ,, 56....	35	7	13	6	26	—	9
52 ,, 54....	13	5	4	3	12	—	1
50 ,, 52....	5	1	4	—	5	—	—
48 ,, 50....	3	—	2	1	3	—	—
46 ,, 48....	3	1	—	2	3	—	—
Total	552	180	152	119	451	275	101
Average....	66·84	65·37	64·7	66·11	65·39	66·6	68·3
Mean........	67·0	66·0	63·0	—	67·0	—	—

* Mean girl.

TABLE XV.—*Showing Various Proportions of the Body in Children from Eight to Thirteen Years.*

[Reduced to English inches, from Quetelet's tables.]

	Age.											
	8.		9.		10.		11.		12.		13.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
Mean height	45·74	44·96	47·95	47·08	50·11	49·17	52·16	51·22	54·13	53·22	56·02	55·11
From vertex to fork	25·51	25·19	26·33	25·98	27·12	26·73	27·91	27·59	28·70	28·54	29·48	29·36
„ fork to sole of foot	20·23	19·77	21·62	21·10	23·00	22·44	24·25	23·63	25·43	24·68	26·54	25·57
Breadth of arms extended horizontally	45·90	44·96	48·18	47·11	50·43	49·21	52·55	51·26	54·64	53·33	56·61	55·27
Length of arm from shoulder to tip of finger	19·76	19·09	20·90	20·00	21·88	20·94	22·87	21·84	23·81	22·75	24·76	23·66
Circumference of trunk at shoulders	25·15	24·16	26·13	24·91	26·96	25·73	27·75	26·48	28·57	27·43	29·36	28·34
„ axillæ	23·02	21·83	23·93	22·54	24·80	23·22	25·65	24·04	26·56	24·80	27·43	25·65
„ sternum	22·43	21·40	23·13	21·96	23·69	22·35	24·44	22·86	25·23	23·38	25·98	24·01
„ haunches	22·95	21·96	24·05	22·36	24·29	23·00	25·00	23·74	25·59	24·72	26·41	25·78
Circumference of arm at biceps	6·02	5·90	6·22	6·14	6·41	6·30	6·61	6·49	6·61	6·69	7·04	6·89
„ leg at calf	8·97	8·62	9·37	8·89	9·72	9·09	10·03	9·40	10·39	9·72	10·70	10·07
„ head at sinuses	13·07	12·67	13·10	12·71	13·14	12·75	13·18	12·79	13·22	12·83	13·26	12·87

TABLE XVI.—*Showing the Number of Children to each Family in Factory and Non-Factory Districts.*

Number of Children in a Family.	Total Number of Families.	Per Cent.	Families in Agricultural Districts.	Per Cent.	Families in Suburban and Rural Factory Districts.	Per Cent.	Families in Non-Factory Towns.	Per Cent.	Families in Factory Towns.	Per Cent.
1…………	79	4·33	10	4·5	33	4·0	8	3·8	28	4·8
2…………	185	10·14	23	10·5	72	8·8	23	11·0	67	11·8
3…………	283	15·52	29	13·3	123	15·0	28	13·3	103	18·0
4…………	302	16·56	31	14·1	137	16·7	33	15·7	101	17·5
5…………	297	16·36	37	17·0	132	16·4	28	13·3	100	17·4
6…………	246	13·56	28	12·8	117	14·2	38	18·0	63	11·0
7…………	190	10·42	23	10·5	96	11·7	18	8·5	53	9·2
8…………	124	6·80	10	4·5	60	7·3	17	8·0	37	6·4
9…………	58	3·13	9	4·1	27	3·2	12	5·7	10	1·7
10…………	32	1·70	8	3·6	13	1·6	2	1·0	9	1·5
11…………	14	0·71	6	2·7	5	0·6	2	1·0	1	0·1
12…………	10	0·54	3	1·3	3	0·3	1	0·5	3	0·5
13…………	2	0·10	1	0·4	1	0·1	—	—	—	—
14…………	—	—	—	—	—	—	—	—	—	—
15…………	1	0·05	1	0·4	—	—	—	—	—	—
	1823	100·00	219	100·0	819	100·0	210	100·0	575	100·0

MISCELLANEA.

CONTENTS:

	PAGE		PAGE
I.—Hungarian Statistics	734	III.—The Depreciation of Silver .	741
II.—Condensed Statistics	739		

I.—*Hungarian Statistics.*

One of the English members of the International Statistical Congress at Buda-Pesth, communicates the following :—

Among the various publications circulated at the Buda-Pesth Congress was a little pocket-book in French and Hungarian, giving an abstract of Hungarian statistics. The compilation being made by Messrs. Keleti and L. Beöthy, is practically an official one, and furnishes a suitable text for a statistical review of Hungary on an occasion when that country has been taking a prominent part in the promotion of statistical knowledge.

The first part of the pocket book is devoted to area and population. The total superficies of Hungary is stated to be 3222·83 *myriametres*, and the population 15,417,327, making the mean population per *myriametre* 4,784. The area of Hungary-Transylvania, *i.e.*, of the Hungarian state exclusive of Croatia-Sclavonia and the military frontiers, is 2803·88 *myriametres*, the population 13,561,247, and the mean population per *myriametre* 4,837. These are the figures according to the census of 1870, but since that time, down to 1874, which is the latest year for which the figures are stated, there would seem to have been no increase of population. The births and deaths in the four years, 1871-74, have been as follows :—

	Births.	Deaths.
1871........................	591,148	535,350
'72........................	563,362	580,445
'73........................	566,792	874,055
'74........................	572,444	571,728
Total	2,293,746	2,561,578

—showing a small excess of deaths over births.

The composition of this population is also set forth in detail. By *sex* the division is 7,654,000 males to 7,764,000 females; by *religion* the main divisions are :—

	Number.	Per Cent. of Total.
Roman Catholics	7,502,000	48·66
Greeks............................	1,588,000	10·30
Schismatic Greeks........	2,579,000	16·73
Lutherans	1,109,000	7·20
Calvinists	2,024,000	13·13
Jews................................	552,000	3·58

leaving only a small balance unaccounted for; and by *race*, the divisions (for Hungary-Transylvania alone) are:—

	Number.	Per Cent. of Total.
Magyar	6,156,000	46·54
German	1,821,000	13·76
Rouman	2,470,000	18·67
Slovack	1,817,000	13·74
Serbian	267,000	2·02
Croat	207,000	1·56
Ruthenian	470,000	3·55
Others	11,000	0·09
Total	13,229,000*	100·0

* The proper addition should be 13,219,000, but this is the total in the original.

This last division, however, as a footnote tells us, is not from the census but from a calculation based on the number and nationality of the children under obligation to attend school, which has been made by M. Keleti. The circumstance that it does not embrace the whole country, but only Hungary-Transylvania, should also be noted.

Another detail of the composition of the population relates to occupation, from which we gather that there are 1,925,000 classed as farmers and proprietors, and 3,089,037 as labourers, engaged in "primary production." The industrial population is at the same time stated as 647,000; engaged in commerce 134,000; engaged in liberal professions 177,000; *rentiers* 80,000; and domestic servants and office boys 1,143,000; leaving in all 8,117,693 without profession, of whom 5,166,466 are under 14 years of age. In other words, the population of Hungary is almost exclusively agricultural.

It will have been observed from the above figures, showing a small excess of deaths over births during the last four years, that the population has been stationary since the last census, but the point seems so important that further details as to the marriage, birth, and death-rates may be added. The birth and death-rates seem both very high, as they have long been in the Austrian Empire, as the following table will show.

Marriage, Birth, and Death-Rates in Hungary. Proportion to Persons Living.

	Marriage-Rate, 1 in	Birth-Rate, 1 in	Death-Rate, 1 in
1864	120	24	29
'65	108	24	33
'66	122	23	25
'67	96	25	33
'68	73	23	29
'69	90	23	31
1870	96	24	30
'71	96	23	25
'72	93	24	23
'73	88	23	15
'74	93	23	23

Down to 1870 it will be seen the death-rate was lower than the birth-rate, and there was an excess of births over deaths, so that the recent excess of deaths over births can hardly be taken as the normal condition of Hungary. There have, no doubt, been special causes in operation lately, among which it appears that 1872-73 were years of a cholera epidemic, but the liability of the population to suffer so much from epidemics or bad harvests is, of course, significant of a backward material condition. While the death-rate is so high as has been stated, it compares —according to the figures in the pocket book—with a rate of 1 in 32 in Austria; 1 in 34 in Bavaria and Saxony; 1 in 33 in Italy; 1 in 36 in France, and 1 in 44 in England.

Passing from the population, we come to the agricultural statistics, which show the following divisions of the national area :—

	Hectares.
Arable land	10,910,078
Meadows	4,138,338
Vineyards	404,625
Pasturage	4,694,669
Forests	9,325,671
Rosaceæ	157,888
Total fertile	29,631,269
Barren	2,597,993
Total	32,229,262

The area and produce of the principal crops in 1874, which seems to have been the best year with one exception since the remarkable harvest of 1868, were as follows :—

	Area.	Produce.
	Hectares.	Hectolitres.
Winter wheat	2,031,356	19,833,440
Oats	1,166,397	11,987,440
Barley	913,684	12,007,600
Hay	1,048,032	14,029,915
Maize	1,602,537	7,602,273*
Potatoes	360,031	15,513,824

* The produce of this crop seems to have been exceptionally low, although the area in cultivation was not less than formerly. The highest and lowest since 1868 had been 21,820,959 and 12,240,240 hectolitres.

The production of wine in the same year was 1,998,082 hectolitres, as compared with 3,763,475 hectolitres in 1873, and a mean of 3,224,286 hectolitres in 1861-72. In addition in 1874, for which year only are the figures given, there was a produce of 7,188,664 kilograms of raisins, of which 1,632,792 kilograms were exported. The estimated value of the total production of the vineyards was 30,372,483 florins (about 2,531,040*l.**) in 1874, as compared with 45 million florins, or 3,750,000*l.*, in 1873, and a mean of 35 million florins, or say 2,784,000*l.*, in 1861-72.

As an illustration of the condition of agriculture, it may be added that of a total of 1,109,460 ploughs reckoned to be used in the country, 530,525 are of iron and no fewer than 578,935 of wood.

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* We convert the florin at 1*s.* 8*d.*

The stock of domestic animals is stated to be—Horses, 2,158,819; cattle, 5,279,193; sheep, 15,076,997, of which 4,582,375 are of improved breed, and the remainder common; and 4,443,279 pigs.

In addition it is stated, as regards certain chief agricultural products, that there were in 1874 over 80,000 distilleries, producing 809,617 hectolitres of alcohol; 20 sugar manufactories, producing 33,393 quintaux-metriques of sugar; and 247 breweries, producing 580,675 hectolitres of beer—in all cases a considerable falling off from previous years.

We come next to the mining statistics, of which, as may be expected, we have very little. The produce of 1874 is given as—

Gold	1,291	kilograms
Silver	17,421	,,
Copper	9,532	quintaux-metriques
Iron	1,603,662	,,
Coal	13,991,643	,,

The total value is put at very nearly 20 million florins, or about 1,650,000*l.* The number of workers in the mines is returned at 45,181, of whom 38,379 are men, 1,558 women, and 5,244 children. There was also a production in 1874 of 1,211,208 quintaux-metriques of salt, giving employment to 1,948 men and 150 children; in this case also there being an important falling off from previous years.

The volume next contains a good many pages respecting commerce, ways ot communication and credit, but these seem less important for the present analysis, except to show that commerce and credit, as may be expected, are very little developed. It is also impossible to state some of the railway figures, on account of their intermixture with those of Austria. As regards foreign trade, the most general figures, for 1874, are:—

	Florins.		£
Special imports	452,386,062	=	37,699,000
,, exports	288,928,650	,,	24,077,000

showing a great excess of imports over exports, which has been continued for several years, and is no doubt the result of the large loans which Hungary, as we shall see, has been raising. Here, also, there is on both sides of the account a considerable falling off as compared with previous years. Of the imports, as far as we can trace, the following appears to have been of articles which can be considered of use for public works or for industry:—

	Florins.		£
Cast iron	1,600,000	=	133,000
Miscellaneous metals	2,019,000	,,	168,000
,, articles in iron and steel	19,837,000	,,	1,653,000
Articles in other metals	2,627,000	,,	219,000
Locomotives, &c.	2,759,000	,,	230,000
Machines	5,520,000	,,	460,000
Timber for building, &c.	1,638,000	,,	136,000
Total	36,000,000	,,	2,999,000

We should doubt whether one-half of this sum was really for reproductive purposes, the third of the above items being especially dubious, but even 3,000,000*l.* is too small an amount considering what the excess of imports over exports, and what the loans, have been. We need not enumerate the main articles of export, as they consist in what seem due proportions of the main articles of production—wheat, wine, wool, pork, &c.

As regards railways, the total length for 1874 is given as 6,392 kilometres, or three times the length in operation in 1866 just before the separation from Austria. It is impossible, however, to show the capital invested, traffic receipts, and other particulars on account of the intermixture of Austrian railways, but as is well known the lines are not profitable, the annual subvention paid by the State having increased rapidly from almost nothing in 1868 to 14,686,783 florins, or 724,000*l.* in 1874, while we believe there has been a further great increase since.

The postal statistics are very full, and show a great development of business, the postal department in Hungary being remarkably well managed. The number of letters, journals, &c., posted, has increased from 57,052,000, or 3·70 per inhabitant, in 1870, to 97,097,000, or 6·30 per inhabitant, in 1874. Post-office orders since 1869 have increased from 138,000 to 1,344,000, and the amounts transmitted from a merely nominal sum to 71,911,000 florins (about 6,000,000*l.*). The total number of offices in 1874 was 1,930. The length of the telegraph system has increased from 675 *myriametres* in 1867 to 1,401 *myriametres* in 1874; but the number of despatches which was 5,872,000 in 1871, was only 5,690,000 in 1874.

As regards institutions of credit, the facts are that there are ninety-six "banks" in place of five in 1867, and that the capital has increased from 18,372,000 florins in 1869 to 52,733,000 florins in 1874. The savings banks in the same time have increased from 54 to 290; peoples' banks and friendly societies from 1 to 201; and other institutions from 9 to 13. The total capital of all these various institutions, including the banks, has increased from 69,087,000 florins in 1870, to 155,087,000 florins, but it does not appear whether this is nominal or paid up capital. The total discounts of the banks are stated to have been 35,156,000 florins in 1874 and advances on merchandise 6,089,000 florins, both very small figures, and for all the credit institutions the figures are 147,029,000 florins, and 27,878,000 florins, a very large part of the discounts and advances being made it seems by the so-called savings banks, which is a novel feature in an English view. In addition there are mortgage loans made by these institutions to the extent of 184,627,000 florins, of which 12,632,000 florins by the banks, 77,436,000 florins by the savings banks, and 49,096,000 by "credit fonciers." The business all round has been nearly doubled in a few years, which appears somewhat singular when taken in connection with the stationary or diminishing character of the production of Hungary in the period. The increase of the deposits "for saving" in all the institutions is from 115,558,000 florins in 1869, to 186,292,000 florins in 1874.

We come next to the judicial statistics, which are also very full, but subject to the usual observation on such statistics in most countries, that it is difficult to know precisely what the figures mean. To take the figures as to crime alone, we make out that there were 30,621 accused in 1872; 34,294 in 1873; and 35,922 in 1874; but with what figures in our own judicial statistics these should be compared, it would be impossible to say. The number of prisoners at the end of 1874, in what are called lock-ups and prisons of tribunals of first instance, was 4,850; in prisons and lock-ups of judges of districts (*arrondissements*), 7,360; and in central houses of correction, 3,311.

There are also statistics of education, which show a total of 1,497,000 children attending school in 1874, out of 2,139,207 obliged to attend, with particulars of higher education; but such figures of course can hardly be used without some knowledge of the educational system, what is meant by attendance, and similar details.

The last great subject dealt with is the finances of the State, as to which we have space for only a few points. As is well known, Hungary has gone ahead too fast, and has become much indebted, but there is no attempt to conceal the worst, so that there is full reason to believe in the sincerity of the efforts being made by raising new taxes and by economy to bring about a financial equilibrium. The broad fact is, that the debt has increased from 248,694,000 florins in 1867 to 548,415,012 florins in 1874, and the expenditure from 194,188,000 to 247,342,000 florins. The revenue at the same time has only increased from 167,211,000 to 182,963,000 florins. In what way the figures would be changed by including 1875 and 1876, and the budget for the following years, I have not sufficient data to say, but while there is a farther increase of debt and debt interest, I understand that there is also a substantial improvement of revenue, and that the taxes this year have been coming in well. All the same it is evident—and as I have said there is no concealment—that Hungary has had very serious financial embarrassments.

To sum up these observations, I should say that Hungary, economically viewed, is a state of 15,000,000 inhabitants, amongst whom there is a high rate of mortality, implying great sensibility to epidemics and the results of bad harvests; that the industry of this people is mainly and almost exclusively agriculture, which has not been very prosperous of late years; that from various causes, apparently the effects of former prosperity and newly acquired liberty, serious financial mistakes have been committed and great embarrassment produced; and that the difficult task of raising a much larger revenue than before, which must aggravate seriously the already hard conditions of life in Hungary, is being bravely encountered in the sound belief that the credit of the State must be upheld at all hazards. That the Hungarians will prosper so as not to feel the weight of the new taxation, must be the wish of all who have shared in the recent hospitalities to the Statistical Congress. Apart from personal feeling which may be prejudiced towards the Hungarian nation, it would also seem desirable politically that a strong constitutional State should be placed where Hungary is, and the only nucleus of such a State is furnished by the Magyar race. If one small voice may say it, I should be disposed to suggest that one of the most fatal obstacles to their development, the isolation of their language, as it cannot be got over by the adoption of German into common speech, owing to race antipathies, might be equally well got over by the adoption of English instead; here there would be no race difficulties, and the use of English would aid the Hungarians in more ways than one, in achieving and confirming a predominant sway for themselves on the lower Danube.

II.—*Condensed Statistics.*

The Editor has received the following memorandum on a statistical abridgment of our *Annual Trade Statistics*, lately issued by Sir Henry Peek:—

An attempt like the present to show how the bulk of statistical volumes could be reduced, ought not to pass without a word of praise in the *Journal of the*

Statistical Society. The collective opinion of the Society has always been in favour of suppressing unnecessary figures in statistical tables—of stating sums in hundreds, thousands, or millions, instead of slavishly using units, where the unit is not required as the foundation of any inference. The regular tables in the *Journal* have always been in accordance with this opinion. It would not perhaps be going too far to assert that those who are most accustomed to use and draw up statistical tables are most strongly in favour of stating the sums they deal with in as compact a form as may be. The present little handbook, occupying not more than 27 pages, is a popular application of the principle for which statisticians contend. It shows how there can be condensed into this small compass, almost all that is essential of the trade statistics for six years past. The sums throughout are in tens of thousands only, and the result is that from two to five figures only are required, where the ordinary mode of writing would take six to ten, a saving from each sum of four figures. The compression consequently has enabled the compiler to put many details into a single page, with the result that the reference is more convenient than the official annual statement, which is for five years only, and that there is a connected view of a longer period. Those who are not acquainted with the surprising waste of space there is in ordinary statistics, will perhaps hardly believe in such a result. The wonder is that such an economy of figures, which all statisticians value, is so slow in making its way into general use. There is a strong prejudice among those who only use statistics occasionally in favour of having all the units in. Some men of business say that they are puzzled and put out by the omission of the units, that they cannot follow a series of sums where the omission has been made. It is quite likely that if an attempt were made in official statistics, especially those of finance and trade, to omit the units, many members of parliament would revolt and call upon the departments to publish figures in the old fashion, no matter what the cost. It would be affirmed that the Government had commenced publishing loose figures instead of the accurate and precise ones which it ought to publish. All this is plainly nothing but prejudice, and politicians and clever men of business should be ashamed of using such arguments or allowing them to be used in their name. As all who have tried know, a very little experience is required in order to handle sums from which units are omitted, and to read them aright with as much ease as if the units were in. If there are any who are unable to acquire such facility, they must be so ignorant of arithmetic, and so devoid of common sense, that they can make no real use of statistics whatever. To keep in the units, moreover, for the benefit of such feeble brethren, has a tendency to encourage a delusion as to the degree of accuracy requisite or possible in many statistics. To take trade statistics as an illustration, no one can suppose for a moment that the statement of the sums in lesser amounts than thousands and in many cases millions, is really accurate. Even if arguments could be based on such *minutiæ*, if they were accurate, the condition of accuracy is entirely wanting. Declarations of value are made at the custom house usually by the lowest clerk in a merchant's office, and these are checked by the responsible department with more or less care, but when all is done it is only approximately that the values thus stated can correspond with the actual value of the goods—with what they have cost the merchant on the one side, and with what they will return to him on the other. The declarations of quantity must also vary greatly from the standard of exact arithmetical accuracy. The usual publication of such units, therefore, is positively misleading to statistical amateurs. They look for a species of accuracy not compatible with the subject-matter, and because they are disappointed they are apt to blame the science itself—to say that the statistics are not good. For these and other reasons then, statisticians should be moving in this important question, where success would so much diminish their labours, correct unsound ideas as to what statistics are, and help to diffuse a better knowledge of statistical data.

The compiler of this little hand-book has also introduced some ingenious groupings of the statistics, so as to bring out broader results than if each was of a large list of articles, and every single country has been dealt with separately; such a condensation is very useful, though there would be reasons against attempting this in other statistical works, and especially in official publications.

III.—*The Depreciation of Silver.*

We make the following extracts from the paper read by Mr. Giffen on 12th October, at the meeting of the Social Science Congress, at Liverpool. The subject of the paper was "The Causes and Effects of the Depreciation of Silver, how Far is it an Evil, and what are the Means of Remedying the Evil?"

"I propose to say very little as to the causes of the depreciation of silver. There is now a very general agreement that these causes are the demonetisation of silver by Germany, the restriction of silver coinage by the Latin Convention, the increased supply from the American mines, and the diminished absorbing power of India, whether temporary or permanent, through the increase of the indebtedness of India to England. The combination of these causes, it is generally agreed, has brought about the recent fall in silver, although opinions may differ greatly as to the extent to which each cause has influenced the result. The only question on this head which it may be necessary to discuss for a moment appears to be the extent of the depreciation. Has it reached its probable limits for the present or for a considerable period? Is a recovery or a still further decline the more probable contingency? Are the causes which have brought about the fall adequate to produce a further depreciation or not? In reply I propose to assume for the purposes of this paper that a speedy further depreciation, resembling the late fall from about 58*d.* to the present price of 52*d.* per oz., is not to be counted upon.* It is the nature of such changes of prices to happen suddenly. When attention is aroused to great causes of change in operation, and a fall or rise has begun, the market disposition is to discount the entire change at once, and even by going beyond the mark produce a considerable reaction, such as appears to have occurred in silver in its recovery from 47*d.* to the present point. That no further catastrophe is impending is also probable from the fact that no further demonetisations of silver comparable in importance with those of Germany and the Latin Convention are immediately threatened. . . . .

"What, then, are the effects of this great depreciation? The most important, I believe, are summed up in this—that in countries having a silver standard the usual effects of a depreciation of the standard will be produced. In other words, these countries will sooner or later experience a general rise of prices, probably with the usual accompaniment of speculation and stimulated trade. The weight of the national debts of such countries, so far as contracted in silver, will also be diminished. On the other side creditors will have less to receive, though debtors have less to pay than was contracted for, and thus many individuals will lose; the wages-receiving classes in such countries will also suffer at first by a real fall in wages; and the annuitant classes generally will be straitened. These have undoubtedly been the effects of the Australian gold discoveries and the consequent depreciation in gold which then occurred, although the immediate fall in wages and other evils have been neutralised or lost sight of in an advance of wages due to other causes, and in a vast industrial progress which was no doubt partly stimulated at one time by the gold discoveries themselves. It is quite possible that there is as yet hardly any trace of these effects in India and other silver countries, but the experience of such changes in past times is sufficient to prove that the effects will follow.

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* The price has since *risen* to 56*d.* per oz. and upwards.

"Such will be the effect of the depreciation on the countries which use silver as money. As regards the use of silver for other purposes than money, the depreciation means the supply of an article valued by mankind at a cheaper price. I need hardly say that such a lowering of price is in itself an undoubted advantage to mankind. The owners of existing stocks of silver will no doubt be relatively poorer, but this is the natural effect of any cheapening of commodities, and is not considered an evil.

"And if these were the only effects of the depreciation of silver to be considered, it would not be possible to affirm that on the whole the depreciation of silver is an evil. No doubt many individuals will suffer, but many also will gain; and it cannot be affirmed, I think, that there is any balance of evil for the community. The cheapening of the commodity as a commodity is an advantage, and the depreciation of the currency is of mixed consequences, some of them undoubtedly good. It may be said that all fluctuations of the standard of value are presumably of bad effect, but I doubt if economic science is sufficiently advanced to enable us to say so. In point of fact all standards do change in value from period to period. Gold itself has undergone extensive changes during the present century, and, as is now well known—Mr. Jevons's demonstrations will be familiar to many here—they are subject to a fluctuation of 10 or 25 per cent. in every credit cycle from the mere change in the state of credit alone. When credit is good all prices rise, that is, the standard depreciates in value; and the present fluctuation in silver does not go beyond the limits of an ordinary change caused by the varying state of credit. The truth seems to be that it is very important for nations to have a standard of value, even though it fluctuates from period to period; and a fluctuation of 10 per cent. and upwards is of so ordinary occurrence that when one occurs from an extraordinary cause, we cannot treat it as itself extraordinary or presumably as productive of extraordinary evil.

"The question then remains whether there is any peculiarity in the depreciation of silver, different from any other depreciation or change in a standard of value, to account for the loud outcry it occasions and the call for heroic remedies. The answer here is also obvious—that there happens to be a large class, including to some extent the Governments of silver-using countries, who are losers by the change. They are among the creditors who have less to receive, while the loss is made obvious to them, because they have to make payments in gold, or have otherwise to convert the silver they receive into gold, and are thus made to ascertain that the silver they receive is less effectual as compared with gold than it was. If there were no exchange operations the outcry would perhaps be less, but as matters stand it is quite intelligible that an immediate apparent loss of rather more than 10 per cent. should be greatly resented. A classification may be made of the complaints. They are not made by the great masses of the silver countries—say by the masses of Russia, Austria, Hungary, or India, who are indeed as yet hardly aware of the depreciation—but chiefly, I think, by two or three classes only. 1st. The Civil Service of India, which is paid in rupees, but has remittances to make to England in gold. Generally all European *employés* in India dependent on fixed salaries are in the same case, though salaries in private employment are, of course, not so fixed as in Government service, and the evil in their case may be more evanescent. 2nd. The Indian Government as having been a large borrower in gold, and being largely indebted in gold for pensions and otherwise, is a heavy loser by the exchange, and the loss for the moment destroys the narrow margin which Indian financiers have to go upon. I do not hear of any other great Government which is in precisely the same difficulty, except perhaps Russia, which has large sums in gold to pay annually, though its foreign debt is not so large in proportion as that of India, and it has no foreign pensions to meet, as India has. Austria and Hungary have also borrowed a little in gold, but not so much in proportion. In as far as they have borrowed they have all a palpable loss by exchange to meet, and minor countries using silver, and which have borrowed in gold, are doubtless in the same predicament. Lastly there are the traders with silver countries who either make temporary or permanent investments in those countries, and who have thus remittances to make home. The losses thus caused have undoubtedly been great. Traders have been exposed to heavy loss on many transactions, though if silver remains steady this cause of loss should cease to affect them. Trade is also hindered by the greater difficulty of making exchanges between gold and silver, where there is no longer a fixed relation between the two metals, this hindrance being of the same nature as that experienced in the trade with countries which have an inconvertible paper money. Bankers and insurance companies, again, who have money out in the silver countries have been forced to endure a great depreciation in their silver assets, which must be recognised when the amounts are converted into gold. It is in this way that the outcry about the silver depreciation has arisen. The Governments of certain silver countries, principally India, happen to have unusually large engagements in gold to meet; the Civil Service of one Government, that of India, is also specially concerned; and there is a large class in certain gold countries, principally England, which has investments in the silver countries, and has thus to face a great loss.

" The losses are undoubtedly great, but I am inclined to think there is also a great deal of exaggeration about them. Passing over the loss of the civil servants of India, which is most serious and unequivocal, I should be inclined to say that as regards traders there is either no loss which does not come within the ordinary chances of trade or which has not at any rate been written off by this time, while the increased difficulty of exchange with silver countries is of a kind which has often been encountered; and as regards Governments that their real sources of revenue are not affected—that if silver is depreciated they must soon be able to raise an increased nominal revenue in silver, and that in this way their temporary deficits will be adjusted. As regards trade, then, the loss by exchange, apart from the excessive fluctuations, amounts to about 10 per cent. in the current year, and this, I maintain, is no more than an ordinary trade fluctuation, against which traders ought to provide. They go into business expecting to meet large gains and losses, and such a fluctuation is one of the chances. Probably the bankers who suffer will have found the fluctuation more out of the way of what they usually calculate on; but the lesson after all only brings home to them their liability to a trade risk when they really engage in trade. Startled as they are by the fluctuation in silver, they ought to remember that such fluctuations are natural in every standard, that they have occurred before both in gold and silver, and that their reliance on a permanent equilibrium between the two was really irrational and the fruit of long habit during a period in which a comparative equilibrium has been maintained by the artificial regulations of the double-currency countries, assisted by a singular combination of events. Now that they are undeceived, bankers and others residing in gold-using countries, and proposing to invest in silver-using countries, will know that they have an additional risk to provide for. Investment may be checked a little in consequence, but that should be the sum-total of the evil to the community of peoples generally, from the losses which bankers and others have sustained. As to the increased difficulty of exchange, which is a permanent hindrance to trade, the circumstance that the difficulty is of a familiar kind should prevent us exaggerating it. When we have seen what fluctuations the exchange with the United States, for instance, has been exposed to by inconvertible paper, without the trade coming to an end, we can hardly be afraid of similar difficulties in connection with silver, where the play of supply and demand will in time be able to adjust the price, and consequently the level of exchange. If the exchange, even with inconvertible paper-money, tends to become tolerably stable, we may anticipate a like stability, as a rule, for the exchange with silver countries, as soon as the causes of the present unusual movement have ceased to operate. As regards the deficits of governments which have to pay interest and charges on their debt in gold, or have other remittances to make in gold while they receive revenue in silver, it is quite plain that when prices within such countries have adjusted themselves to the depreciation they will, in the absence of any special difficulties, be as able as before to make their gold payments. They will have more silver to give in exchange for the same quantity of gold; but then they will be receiving more silver. As they will have a real gain at the same time on their home debt, payable in silver, it cannot be said that the temporary embarrassment occasioned while prices are being adjusted to the depreciation is so very serious a matter to them as it appears at first sight. Special difficulties in the way of the Government being able to raise an increased silver revenue are no doubt alleged in the case of India; but India is not the only case to be considered, and the presumption is that, if there are such special difficulties, they must interfere with and embarrass Indian finance in other ways, and should be grappled with accordingly. . . . . If the view I have taken is correct, the case is plainly not one for heroic remedies."

REGISTRATION OF THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES—QUARTER ENDED JUNE, 1876.
BIRTHS AND DEATHS—QUARTER ENDED SEPTEMBER, 1876.

A.—*Serial Table of* MARRIAGES, BIRTHS, *and* DEATHS, *returned in the Years* 1876-70, *and in the* QUARTERS *of those Years.*

Calendar YEARS, 1876-70:—*Numbers.*

Years	'76.	'75.	'74.	'73.	'72.	'71.	'70.
Marriages No.	—	200,980	202,010	205,615	201,267	190,112	181,655
Births........ ,,	—	850,187	854,956	829,778	825,907	797,428	792,787
Deaths .... ,,	—	546,317	526,632	492,520	492,265	514,879	515,329

QUARTERS *of each Calendar Year*, 1876-70.

(I.) MARRIAGES:—*Numbers.*

Qrs. ended last day of	'76.	'75.	'74.	'73.	'72.	'71.	'70.
March........ No.	41,757	42,237	41,413	41,217	40,539	36,305	36,455
June .... ,,	51,218	48,360	52,827	53,408	50,380	48,831	46,720
September ,,	—	49,817	49,144	49,709	49,818	46,536	43,900
December ,,	—	60,566	58,626	61,281	60,530	58,440	54,580

(II.) BIRTHS:—*Numbers.*

Qrs. ended last day of	'76.	'75.	'74.	'73.	'72.	'71.	'70.
March........ No.	229,980	215,251	214,514	215,744	208,752	209,523	206,366
June .... ,,	225,866	214,650	217,598	206,516	208,790	201,165	203,615
September ,,	216,167	210,781	210,323	204,167	201,746	193,271	192,521
December ,,	—	209,505	212,521	203,351	206,619	193,469	190,285

(III.) DEATHS:—*Numbers.*

Qrs. ended last day of	'76.	'75.	'74.	'73.	'72.	'71.	'70.
March........ No.	142,269	162,514	136,518	132,432	134,952	138,393	143,773
June .... ,,	126,212	130,797	123,907	118,582	120,835	120,793	121,128
September ,,	119,909	121,459	124,253	114,676	118,927	121,332	124,297
December ,,	—	131,547	141,954	126,830	117,551	134,361	126,131

Annual Rates of Marriages, Births, *and* Deaths, *per* 1,000 Persons Living *in the Years* 1876-70, *and the* Quarters *of those Years.*

Calendar Years, 1876-70:—*General Ratios.*

Years............	'76.	Mean '66–75.	'75.	'74.	'73.	'72.	'71.	'70.
Estmtd. Popln. of England *in thousands* in middle of each Year....	24,244,	—	23,944,	23,649,	23,356,	23,068,	22,783,	22,501,
Persons Married	—	16·8	16·8	17·1	17·6	17·5	16·7	16·1
Births	—	35·4	35·5	36·2	35·5	35·8	35·0	35·2
Deaths................	—	22·2	22·8	22·3	21·1	21·3	22·6	22·9

Quarters *of each Calendar Year*, 1876-70.

(I.) Persons Married :—*Ratio per* 1,000.

Qrs. ended last day of	'76.	Mean '66–75.	'75.	'74.	'73.	'72.	'71.	'70.
March	13·8	13·8	14·3	14·2	14·3	14·1	12·9	13·2
June....................	16·9	17·1	16·2	17·9	18·3	17·5	17·2	16·7
September	—	16·4	16·5	16·5	16·9	17·1	16·2	15·5
December	—	19·8	20·1	19·7	20·8	20·8	20·4	19·2

(II.) Births :—*Ratio per* 1,000.

Qrs. ended last day of	'76.	Mean '66–75.	'75.	'74.	'73.	'72.	'71.	'70.
March	38·0	36·9	36·5	36·8	37·5	36·3	37·3	37·3
June....................	37·4	36·1	36·0	36·9	35·5	36·3	35·5	36·4
September	35·4	34·5	34·9	35·3	34·7	34·7	33·7	34·0
December	—	34·5	34·7	35·7	34·5	35·5	33·7	33·6

(III.) Deaths :—*Ratio per* 1,000.

Qrs. ended last day of	'76.	Mean '66–75.	'75.	'74.	'73.	'72.	'71.	'70.
March	23·5	24·6	27·5	23·4	23·0	23·5	24·7	26·0
June....................	20·9	21·4	21·9	21·0	20·4	21·0	21·3	21·6
September	19·6	21·0	20·1	20·8	19·5	20·5	21·1	22·0
December	—	22·1	21·8	23·8	21·5	20·2	23·4	22·3

B.—*Comparative Table of* CONSOLS, PROVISIONS, PAUPERISM, *and* COAL *in each of the Nine* QUARTERS *ended September*, 1876.

1	2	3	4		5	6	7	8	9	10	
Quarters ending	Average Price of Consols (for Money).	Average Rate of Bank of England Discount.	Average Price of Wheat per Quarter in England and Wales.		Average Prices of Meat per lb. at the Metropolitan Meat Market (by the Carcass), with the *Mean* Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism. Quarterly Average of the Number of Paupers relieved on the *last day* of each week.		Sea-borne Coal in London Market per Ton.	
					Beef.	Mutton.		In-door.	Out-door.		
	£		*s.*	*d.*	*d. d. d.*	*d. d. d.*	*s. s. s.*			*s.*	*d.*
1874 Sept. 30	92⅝	3·0	55	5	5¼—8 6⅝	5¼—7¾ 6½	75—104 90	129,993	592,989	23	3
Dec. 31	93	4·6	44	4	4⅞—8¼ 6⅝	4¾—8 6⅜	73—96 84	138,868	587,772	24	7
1875 Mar. 31	92¾	3·7	42	6	5—8 6½	4¾—8 6⅜	81—111 96	146,708	622,652	22	5
June 30	93¾	3·5	42	6	5¼—8¼ 6¾	5½—9½ 7½	80—120 100	131,717	592,362	20	8
Sept. 30	94⅜	2·4	49	–	5½—8½ 7	5½—9½ 7½	70—93 82	125,614	555,409	20	4
Dec. 31	94⅜	3·2	46	7	5½—8¼ 6⅞	6—9¼ 7⅝	105—127 116	136,124	546,251	22	6
1876 Mar. 31	94⅛	4·1	43	8	5½—8 6¾	5½—9 7¼	121—151 136	145,088	558,026	19	9
June 30	95½	2·2	45	10	5—8¼ 6⅝	5—10 7½	125—170 147	134,357	535,419	18	8
Sept. 30	95⅞	2·0	47	1	5¼—8½ 6⅞	5¾—9¾ 7¾	—	130,349	517,196	19	–

C.—*General Average Death-Rate Table:—Annual Rate of Mortality to* 1,000 *of the Population in the Eleven Divisions of England.*

Divisions.	Average Annual Rate of Mortality to 1,000 Living in						
	Ten Years. 1861-70.	1875. Quarters ending			1876. Quarters ending		
		June.	Sept.	Dec.	March.	June.	Sept.
England and Wales	22·4	21·9	20·1	21·8	23·5	20·9	19·6
I. London	24·3	21·9	21·5	24·3	24·7	20·9	21·5
II. South-Eastern counties	19·1	18·6	16·1	17·5	19·2	17·3	16·5
III. South Midland „	20·2	19·8	17·7	18·8	20·5	17·4	17·0
IV. Eastern counties	20·1	20·2	17·9	19·0	20·3	18·0	16·9
V. South-Western counties	19·9	20·1	15·9	19·6	21·5	19·6	16·4
VI. West Midland „	21·8	21·7	19·1	21·0	23·4	20·1	19·1
VII. North Midland „	20·8	21·8	21·2	21·2	23·2	20·5	20·5
VIII. North-Western „	26·3	24·6	23·3	25·7	29·0	25·2	22·9
IX. Yorkshire	24·0	23·7	22·9	23·5	23·9	22·6	21·4
X. Northern counties	22·7	22·3	23·7	22·6	23·2	20·6	20·2
XI. Monmouthshire and Wales	21·6	23·4	18·1	20·5	23·2	22·4	17·6

D.—*Special Average Death-Rate Table:*—ANNUAL RATE *of* MORTALITY *per* 1,000 *in* TOWN *and* COUNTRY DISTRICTS *of* ENGLAND *in each Quarter of the Years* 1876-74.

	Area in Statute Acres.	Population Enumerated. 1871.	Quarters ending	Annual Rate of Mortality per 1,000 in each Quarter of the Years 1876.	Mean '66-75.	1875.	1874.
In 131 Districts, and 59 Sub-districts, comprising the *Chief Towns*	3,184,419	12,900,142	March ..	25·3	26·6	28·9	25·1
			June	22·1	22·8	22·7	22·3
			Sept.	21·7	23·7	22·3	23·4
			Dec.	—	24·6	23·9	26·5
			Year	—	24·4	24·5	24·3
In the remaining Districts and Sub-districts of England and Wales, comprising chiefly *Small Towns* and *Country Parishes*	34,134,802	9,812,124	Year	—	19·4	20·7	19·5
			March ..	21·1	22·1	25·7	21·2
			June ...	19·2	19·5	20·8	19·3
			Sept.	16·7	17·3	17·2	17·4
			Dec.	—	18·7	18·9	20·2

Note.—The three months January, February, March, contain 90, and in leap year 91 days; the three months April, May, June, 91 days; and each of the last two quarters of the year, 92 days. For this inequality a correction is made in calculating the rate of mortality in the different quarters of the year.

E.—*Special Town Table:*—POPULATION; BIRTHS, DEATHS; MEAN TEMPERATURE *and* RAINFALL *in the Third Quarter of* 1876, *in* TWENTY-THREE *Large Towns.*

Cities, &c.	Estimated Population in the Middle of the Year 1876.	Births in 13 Weeks ending 30th Sept., 1876.	Deaths in 13 Weeks ending 30th Sept., 1876.	Annual Rate to 1,000 Living during the 13 Weeks ending 30th Sept., 1876. Births.	Deaths.	Mean Temperature in 13 Weeks ending 30th Sept., 1876.	Rainfall in Inches in 13 Weeks ending 30th Sept., 1876.
Total of 23 towns in U. K.	8,028,595	73,184	45,459	36·6	22·7	59·3	8·45
London	3,489,428	30,659	18,926	35·3	21·8	61·8	5·25
Brighton	100,632	722	480	28·8	19·1	60·2	8·84
Portsmouth	124,867	974	747	31·3	24·0	—	—
Norwich	83,430	658	493	31·7	23·7	59·9	8·46
Plymouth	72,230	491	331	27·3	18·4	60·1	10·71
Bristol	199,539	1,780	1,053	35·8	21·2	61·6	13·01
Wolverhampton	72,549	710	416	39·3	23·0	59·4	9·49
Birmingham	371,839	3,807	2,119	41·1	22·9	—	—
Leicester	113,581	1,143	828	40·4	29·3	60·5	8·49
Nottingham	93,627	846	524	36·3	22·5	59·5	6·66
Liverpool	521,544	5,108	3,223	39·3	24·8	57·8	9·02
Manchester	357,917	3,414	2,447	38·3	27·4	—	10·22
Salford	138,425	1,699	1,036	49·3	30·0	57·5	10·56
Oldham	88,609	919	577	41·6	26·1	—	—
Bradford	173,723	1,686	919	39·0	21·2	58·1	6·99
Leeds	291,580	2,896	1,961	39·9	27·0	59·4	6·37
Sheffield	274,914	2,711	1,680	39·6	24·5	59·3	7·42
Hull	136,933	1,387	863	40·7	25·3	58·4	7·03
Sunderland	108,343	1,072	607	39·7	22·5	58·5	7·68
Newcastle-on-Tyne	139,929	1,396	792	40·0	22·7	—	—
Edinburgh	215,146	1,822	903	34·0	16·8	—	—
Glasgow	545,144	5,055	2,931	37·2	21·6	56·2	10·72
Dublin	314,666	2,229	1,603	28·4	20·4	58·6	7·06

F.—*Divisional Table:*—MARRIAGES *Registered in Quarters ended* 30*th June,* 1876-74; *and* BIRTHS *and* DEATHS *in Quarters ended* 30*th September,* 1876-74.

1	2	3	4	5	6
DIVISIONS. (England and Wales.)	AREA* in Statute Acres.	POPULATION, 1871. (*Persons.*)	MARRIAGES in Quarters ended 30th June.		
			1876.	1875.	1874.
		No.	No.	No.	No.
ENGLD. & WALES....*Totals*	37,319,221	22,712,266	51,218	48,360	52,737
I. London	75,362	3,254,260	8,704	8,166	8,676
II. South-Eastern	3,994,431	2,167,726	4,219	3,812	4,086
III. South Midland	3,201,325	1,442,654	2,392	2,121	2,343
IV. Eastern	3,211,441	1,218,728	1,932	1,712	1,850
V. South-Western	4,981,170	1,880,777	3,323	3,191	3,673
VI. West Midland	3,945,460	2,720,669	6,063	5,672	6,072
VII. North Midland........	3,535,445	1,406,935	3,567	3,244	3,825
VIII. North-Western........	1,998,914	3,389,044	8,762	8,475	8,946
IX. Yorkshire	3,702,384	2,395,569	5,880	5,569	5,966
X. Northern	3,547,947	1,414,234	3,390	3,514	3,955
XI. Monmthsh. & Wales	5,125,342	1,421,670	2,986	2,884	3,345

7	8	9	10	11	12	13
DIVISIONS. (England and Wales.)	BIRTHS in Quarters ended 30th September.			DEATHS in Quarters ended 30th September.		
	1876.	1875.	1874.	1876.	1875.	1874.
	No.	No.	No.	No.	No.	No.
ENGLD. & WALES....*Totals*	216,167	210,781	209,898	119,909	121,459	124,099
I. London	30,659	29,697	29,137	18,926	18,469	17,486
II. South-Eastern	17,996	17,658	17,238	9,853	9,400	9,159
III. South Midland........	12,251	12,035	11,861	6,566	6,747	6,400
IV. Eastern	10,015	9,890	9,795	5,382	5,651	5,240
V. South-Western	13,563	13,623	13,812	7,862	7,634	7,947
VI. West Midland	26,272	25,578	25,439	13,813	13,736	14,369
VII. North Midland........	13,870	12,971	13,106	7,624	7,807	7,536
VIII. North-Western........	36,300	35,101	35,187	21,022	21,182	23,758
IX. Yorkshire	26,020	24,844	24,899	14,496	14,857	15,188
X. Northern	15,641	16,199	16,188	7,732	9,222	9,623
XI. Monmthsh. & Wales	13,580	13,185	13,236	6,633	6,754	7,393

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* These are revised figures, and will be found to differ somewhat from those first published.

G.—*General Meteorological Table, Quarter ended 30th September,* 1876.

[Abstracted from the particulars supplied to the Registrar-General by JAMES GLAISHER, ESQ., F.R.S., &c.]

1876. Months.	Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
	Air.			Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames				
	Mean	Diff. from Average of 105 Years.	Diff. from Average of 35 Years.	Mean.	Diff. from Average of 35 Years.	Mean.	Diff. from Average of 35 Years.	Mean.	Diff. from Average of 35 Years.		Mean.	Diff. from Average of 35 Years.	Mean.	Diff. from Average of 35 Years.
	°	°	°	°	°	°	°	°	°	°	In.	In.	Grs.	Gr.
July......	65·9	+4·3	+3·8	60·2	+2·5	55·5	+1·6	24·9	+3·7	68·0	·442	+·025	4·9	+0·3
Aug. ...	63·7	+2·9	+2·3	58·2	+0·8	53·6	−0·2	23·4	+3·6	67·2	·412	−·004	4·6	0·0
Sept. ...	55·8	−0·8	−1·5	52·9	−1·2	50·2	−1·0	17·1	−1·4	59·3	·365	−·016	4·1	−0·1
Mean ...	61·8	+2·1	+1·5	57·1	+0·7	53·1	+0·1	21·8	+2·0	64·8	·406	+·002	4·5	+0·1

1876. Months.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass.				
										Number of Nights it was			Lowest Reading at Night.	Highest Reading at Night.
	Mean.	Diff. from Average of 35 Years.	Mean.	Diff. from Average of 35 Years.	Mean.	Diff. from Average of 35 Years.	Amnt.	Diff. from Average of 61 Years.		At or below 30°.	Between 30° and 40°.	Above 40°.		
			In.	In.	Grs.	Grs.	In.	In.	Miles.				°	°
July......	69	− 6	29·902	+·100	526	− 2	0·7	−1·9	240	0	1	30	38·6	58·0
Aug. ...	70	− 7	29·768	−·027	526	− 3	2·0	−0·4	263	0	3	28	34·1	59·7
Sept. ...	82	+ 1	29·620	−·187	532	− 1	2·6	+0·1	272	0	7	23	36·5	53·0
Mean ...	74	− 4	29·763	−·038	528	− 2	Sum 5·3	Sum −2·2	Mean 258	Sum 0	Sum 11	Sum 81	Lowest 34·1	Highst 59·7

Note.—In reading this table it will be borne in mind that the sign (−) minus signifies below the average, and that the sign (+) plus signifies above the average.

The mean temperature of the air for July was 65°·9, being 4°·3 and 3°·8 above the averages of the preceding 105 years, and 35 years respectively; it was higher than any previous value back to 1841, with the exception of the year 1859 which was 68°·1, and the year 1868 which was 67°·5.

The mean temperature of the air for August was 63°·7, being 2°·9 and 2°·3 above the averages of the preceding 105 years and 35 years respectively; it was 3°·4 and 0°·7 above the values in 1874 and 1875 respectively.

The mean temperature of the air for September was 55°·8, being 0°·8 and 1°·5 below the averages of the preceding 105 years and 35 years respectively; it was 2°·1 and 4°·2 below the values in 1874 and 1875 respectively, but 1°·1 above that in 1873.

The mean high day temperatures of the air were 5°·7 and 3°·8 above their respective averages in July and August; but 2°·0 below in September.

The mean low night temperatures of the air were 2°·0 and 0°·3 above their respective averages in July and August; but 0°·6 below in September.

H.—*Special Meteorological Table, Quarter ended* 30*th September*, 1876.

1	2	3	4	5	6	7	8	9
NAMES OF STATIONS.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	*Mean Temperature of the Air.*	Mean Degree of Humidity.
	in.	°	°	°	°	°	°	
Guernsey................	29 ·544	79 ·0	46 ·0	33 ·0	25 ·5	10 ·5	59 ·7	87
Osborne	29 ·481	93 ·9	42 ·0	51 ·9	41 ·9	19 ·4	62 ·2	85
Barnstaple	29 ·521	94 ·0	47 ·5	46 ·5	36 ·8	13 ·2	62 ·8	76
Blackheath	29 ·533	90 ·3	41 ·9	48 ·4	40 ·7	19 ·4	61 ·2	74
Royston	29 ·573	94 ·8	39 ·6	55 ·2	45 ·5	23 ·2	60 ·4	77
Norwich	29 ·460	87 ·0	42 ·0	45 ·0	35 ·2	16 ·2	60 ·1	86
Llandudno	29 ·506	86 ·6	41 ·5	45 ·1	36 ·0	14 ·1	59 ·3	78
Hull........................	29 ·486	87 ·0	42 ·0	45 ·0	35 ·7	16 ·5	58 ·9	77
Stonyhurst	29 ·505	87 ·2	38 ·1	49 ·1	41 ·3	16 ·6	58 ·3	78
North Shields........	—	82 ·5	39 ·6	42 ·9	30 ·1	10 ·9	55 ·7	77

10	11	12	13	14	15	16	17	18
NAMES OF STATIONS.	WIND.					Mean Amount of Cloud.	RAIN.	
	Mean estimated Strength.	Relative Proportion of					Number of Days on which it fell.	Amount Collected.
		N.	E.	S.	W.			in.
Guernsey................	1 ·4	7	5	9	10	4 ·1	40	7 ·39
Osborne	0 ·2	4	4	8	14	4 ·9	37	7 ·55
Barnstaple	0 ·4	4	4	10	13	3 ·8	47	9 ·78
Blackheath	1 ·2	6	5	9	11	5 ·1	42	5 ·47
Royston	—	6	4	8	13	5 ·6	37	6 ·74
Norwich	—	5	7	8	11	—	41	8 ·69
Llandudno	0 ·7	5	3	5	18	6 ·1	45	9 ·09
Hull........................	—	—	—	—	—	—	39	7 ·11
Stonyhurst	—	6	4	6	15	6 ·7	55	15 ·01
North Shields........	1 ·5	8	5	5	12	6 ·1	48	6 ·76

No. II.—SCOTLAND.

MARRIAGES, BIRTHS AND DEATHS IN THE QUARTER ENDED 30TH SEPTEMBER, 1876.

I.—*Serial Table:—Number of Births, Deaths, and Marriages in Scotland, and their Proportion to the Population estimated to the Middle of each Year, during each Quarter of the Years* 1876-72 *inclusive.*

	1876.		1875.		1874.		1873.		1872.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1st Quarter—										
Births	32,333	3·67	31,096	3·56	29,837	3·45	30,210	3·52	29,506	3·47
Deaths	21,294	2·41	25,116	2·87	20,775	2·40	21,443	2·50	21,245	2·50
Marriages	6,663	0·75	6,369	0·73	6,777	0·78	6,618	0·77	5,820	0·68
Mean Temperature	37°·9		38°·7		40°·9		38°·1		40°·7	
2nd Quarter—										
Births	33,088	3·75	32,294	3·70	32,295	3·73	31,283	3·64	30,726	3·61
Deaths	19,270	2·18	19,518	2·23	19,640	2·27	19,931	2·32	19,045	2·24
Marriages	6,459	0·73	6,638	0·76	6,730	0·78	6,690	0·78	6,398	0·75
Mean Temperature	49°·2		50°·73		49°·53		49°·2		49°·2	
3rd Quarter—										
Births	30,790	3·49	30,123	3·45	30,702	3·55	28,975	3·38	29,181	3·43
Deaths	16,465	1·87	18,050	2·07	18,099	2·09	17,072	1·99	16,692	1·96
Marriages	5,895	0·67	5,723	0·65	5,582	0·64	5,816	0·68	5,891	0·69
Mean Temperature	56°·0		57°·27		56°·03		55°·4		55°·8	
4th Quarter—										
Births	—	—	30,180	3·45	30,961	3·58	29,270	3·41	29,460	3·46
Deaths	—	—	19,101	2·19	22,162	2·54	18,411	2·15	18,759	2·20
Marriages	—	—	7,191	0·82	7,158	0·83	7,606	0·88	7,471	0·88
Mean Temperature	—		41°·7		39°·5		42°·7		41°·8	
Year—										
Population	3,527,811		3,495,214		3,462,916		3,430,923		3,399,226	
Births	—	—	123,693	3·54	123,795	3·57	119,738	3·49	118,873	3·49
Deaths	—	—	81,785	2·34	80,676	2·33	76,857	2·24	75,741	2·22
Marriages	—	—	25,921	0·74	26,247	0·76	26,730	0·78	25,580	0·75

II.—*Special Average Table:—Number of Births, Deaths, and Marriages in Scotland and in the Town and Country Districts during the Quarter ending 30th September,* 1876, *and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

Registration Groups of Districts.	Population.		Total Births.			Illegitimate Births.		
	Census, 1871.	Estimated to Middle of 1876.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
Scotland	3,360,018	3,527,811	30,790	3·49	29	2,686	8·72	11·5
Principal towns	1,068,556	1,194,357	10,737	3·59	28	903	8·4	11·9
Large „	332,180	350,302	3,723	4·25	24	275	7·4	13·5
Small „	773,164	800,825	7,209	3·60	28	568	7·9	12·7
Mainland rural	1,049,114	1,052,754	8,192	3·11	32	875	10·7	9·4
Insular „	132,004	129,573	929	2·87	35	65	7·0	14·3

Registration Groups of Districts.	Population.		Deaths.			Marriages.		
	Census, 1871.	Estimated to Middle of 1876.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
Scotland	3,360,018	3,527,811	16,465	1·87	53	5,895	0·67	149
Principal towns	1,068,556	1,194,357	6,135	2·05	49	2,550	0·85	118
Large „	332,180	350,302	2,106	2·40	42	751	0·86	116
Small „	773,164	800,825	3,812	1·90	53	1,303	0·65	154
Mainland rural	1,049,114	1,052,754	3,976	1·51	66	1,218	0·45	222
Insular „	132,004	129,573	436	1·35	74	73	0·23	444

III.—*Bastardy Table:—Proportion of Illegitimate in every Hundred Births in the Divisions and Counties of Scotland, during the Quarter ending 30th September,* 1876.

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
Scotland	8·7						
Northern	7·7	Shetland	2·9	Forfar	10·0	Lanark	7·3
		Orkney	8·2	Perth	10·7	Linlithgow .	5·1
North-Western	6·6	Caithness	12·0	Fife	7·3	Edinburgh .	7·9
North-Eastern	14·9	Sutherland....	5·7	Kinross	20·4	Haddington	7·0
East Midland ..	9·2	Ross and Cromarty	3·6	Clackmannan	5·6	Berwick	8·6
West Midland.	6·8	Inverness	9·3	Stirling	6·1	Peebles........	9·5
		Nairn	20·3	Dumbarton ..	5·7	Selkirk	6·6
South-Western	7·2	Elgin	19·5	Argyll	9·1	Roxburgh ..	10·7
South-Eastern.	7·6	Banff	17·6	Bute	8·2	Dumfries	15·9
		Aberdeen	14·3	Renfrew........	6·0	Kirkcudbright ..	13·7
Southern	14·9	Kincardine....	8·6	Ayr................	7·5	Wigtown	19·7

IV.—*Divisional Table:*—MARRIAGES, BIRTHS, *and* DEATHS *Registered in the Quarter ended* 30*th September*, 1876.

1 DIVISIONS. (Scotland)	2 AREA in Statute Acres.	3 POPULATION, 1871. (*Persons.*)	4 Marriages.	5 Births.	6 Deaths.
		No.	No.	No.	No.
SCOTLAND .... *Totals*	19,639,377	3,360,018	5,895	30,790	16,465
I. Northern	2,261,622	127,191	102	837	422
II. North-Western	4,739,876	166,351	119	1,149	655
III. North-Eastern	2,429,594	393,199	593	3,258	1,522
IV. East Midland	2,790,492	559,676	821	4,587	2,548
V. West Midland	2,693,176	251,088	364	2,138	1,209
VI. South-Western	1,462,397	1,183,218	2,709	12,930	7,023
VII. South-Eastern	1,192,524	475,523	927	4,313	2,246
VIII. Southern	2,069,696	203,772	260	1,578	840

No. III.—GREAT BRITAIN AND IRELAND.

SUMMARY *of* MARRIAGES, *in the Quarter ended* 30*th June*, 1876; *and* BIRTHS *and* DEATHS, *in the Quarter ended* 30*th September*, 1876.

COUNTRIES.	[000's omitted.]		Marriages.	Per 1,000 of Population.	Births.	Per 1,000 of Population.	Deaths.	Per 1,000 of Population.
	Area in Statute Acres.	Population, 1871. (*Persons.*)						
		No.	No.	Ratio.	No.	Ratio.	No.	Ratio.
England and Wales	37,319,	22,712,	51,218	2·2	216,167	9·5	119,909	5·2
Scotland	19,639,	3,360,	5,895	1·7	30,790	9·1	16,465	4·8
Ireland	20,323,	5,412,	4,824	0·8	33,121	6·1	18,631	3·4
GREAT BRITAIN AND IRELAND	77,281,	31,484,	61,937	1·9	280,078	8·8	155,005	4·9

Note.—The numbers against Ireland represent the marriages, births, and deaths that the local registrars have *succeeded* in recording; but how far the registration approximates to absolute completeness, does not at present appear to be known. It will be seen that the Irish ratios of marriages, births, and deaths are much under those of England and Scotland.—ED. *S. J.*

rade of United Kingdom, 1876-75-74.—*Distribution of* Exports* *from United Kingdom, according to the Declared Real Value of the Exports; and the Declared Real Value (Ex-duty) of* Imports *at Port of Entry, and therefore including Freight and Importer's Profit.*

Merchandise (*excluding Gold and Silver*) Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	First Nine Months.					
	1876.		1875.		1874.	
	Imports from	*Exports to*	Imports from	*Exports to*	Imports from	*Exports to*
I.—Foreign Countries:	£	£	£	£	£	£
orthern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland	22,706,	9,688,	24,324,	11,497,	27,063,	12,972,
entral Europe; viz., Germany, Holland, and Belgium	37,487,	28,436,	36,731,	31,846,	35,682,	33,868,
estern Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)	43,598,	18,017,	45,724,	16,948,	44,312,	18,958,
outhern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	5,123,	6,933,	5,604,	6,987,	4,100,	6,881,
evant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	13,968,	6,537,	11,453,	7,511,	11,583,	8,767,
orthern Africa; viz., Tripoli, Tunis, Algeria and Morocco	1,118,	482,	1,247,	420,	1,239,	441,
estern Africa	1,010,	792,	1,232,	585,	1,271,	668,
astern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Mooria Islands	266,	285,	145,	298,	282,	289,
dian Seas, Siam, Sumatra, Java, Philippines; other Islands	2,603,	1,801,	2,628,	2,061,	2,460,	1,310,
uth Sea Islands	84,	36,	365,	2,035,	54,	26,
hina and Japan, including Hong Kong	10,607,	6,978,	10,447,	6,731,	8,639,	7,323,
nited States of America	58,671,	13,197,	53,018,	17,693,	58,827,	22,487,
exico and Central America	1,334,	866,	1,781,	1,265,	1,428,	909,
oreign West Indies and Hayti	3,083,	2,132,	3,634,	2,858,	4,098,	2,140,
outh America (Northern), New Granada, Venezuela, and Ecuador	819,	1,380,	984,	1,208,	958,	3,882,
„ (Pacific), Peru, Bolivia, Chili, and Patagonia	11,090,	2,482,	6,706,	3,090,	7,817,	3,195,
„ (Atlantic) Brazil, Uruguay, and Buenos Ayres	1,875,	6,470,	7,928,	7,463,	7,670,	9,143,
hale Fisheries; Grnlnd., Davis' Straits, Southn. Whale Fishery, & Falkland Islands	112,	21,	351,	19,	105,	12,
Total—Foreign Countries	215,554,	106,533,	214,272,	120,515,	217,588,	131,771,
II.—British Possessions:						
itish India, Ceylon, and Singapore	27,755,	18,931,	24,286,	19,962,	29,971,	20,640,
ustral. Cols.—N. So. W., Vict., and Queensld.	13,121,	8,185,	13,752,	9,351,	10,637,	8,351,
„ „ So. Aus., W. Aus., Tasm., and N. Zealand	7,203,	3,988,	7,711,	4,299,	6,443,	4,727,
itish North America	6,816,	6,478,	6,068,	8,258,	7,922,	8,329,
„ W. Indies with Btsh. Guiana & Honduras	6,504,	2,173,	7,729,	2,167,	5,795,	2,241,
ape and Natal	3,302,	3,514,	4,572,	3,488,	3,091,	3,150,
t. W. Co. of Af., Ascension and St. Helena	725,	547,	1,421,	569,	407,	663,
auritius	760,	243,	697,	268,	903,	453,
annel Islands	589,	444,	384,	489,	559,	615,
Total—British Possessions	66,775,	44,503,	66,620,	48,851,	65,728,	49,169,
General Total £	282,329,	151,036,	280,892,	169,366,	283,316,	180,940,

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* *i.e.*, British and Irish produce and manufactures.

IMPORTS.—(United Kingdom.)—**First Nine Months** (*January—September*), **1876-75-74-73-72.** — *Declared Real Value* (*Ex-duty*), *at Port of Entry* (*and therefore including Freight and Importer's Profit*), *of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.*

(Nine Months.)	[000's omitted.] FOREIGN ARTICLES IMPORTED.	1876.	1875.	1874.	1873.	1872.
		£	£	£	£	£
RAW MATLS.—*Textile, &c.*	Cotton Wool	32,095,	34,977,	38,932,	43,125,	42,218,
	Wool (Sheep's) ..	27,058,	22,037,	10,349,	17,650,	16,963,
	Silk*	10,715,	11,271,	10,918,	10,221,	11,193,
	Flax	2,646,	3,348,	4,755,	4,400,	3,785,
	Hemp	1,652,	3,978,	4,761,	4,745,	5,010,
	Indigo	1,925,	1,544,	2,053,	2,215,	2,399,
		76,091,	77,155,	81,768,	82,356,	81,568,
" " *Various.*	Hides	4,683,	5,368,	4,967,	5,251,	5,024,
	Oils	5,797,	3,183,	2,599,	2,437,	3,396,
	Metals	10,161,	7,159,	7,220,	6,967,	10,198,
	Tallow	2,155,	1,407,	1,829,	2,244,	2,157,
	Timber	13,275,	10,272,	16,357,	12,280,	9,246,
		36,071,	27,389,	32,972,	29,179,	30,021,
" " *Agrcltl.*	Guano	1,689,	700,	1,275,	1,350,	8,816,
	Seeds	5,936,	6,349,	5,497,	4,589,	5,013,
		7,625,	7,049,	6,772,	5,939,	5,829,
TROPICAL, &c., PRODUCE.	Tea	9,242,	10,087,	7,702,	7,344,	8,732,
	Coffee	5,647,	6,405,	6,056,	6,336,	4,404,
	Sugar & Molasses	16,304,	14,368,	13,152,	13,990,	16,487,
	Tobacco	3,002,	2,111,	2,919,	3,090,	1,912,
	Rice	2,303,	2,047,	2,950,	2,228,	2,036,
	Fruits	2,125,	1,809,	1,743,	1,381,	1,944,
	Wines	5,247,	5,058,	5,224,	5,940,	5,940,
	Spirits	3,082,	2,283,	2,104,	2,255,	2,170,
		46,952,	44,168,	41,850,	42,564,	43,625,
FOOD	Grain and Meal.	39,084,	38,263,	39,974,	37,406,	33,198,
	Provisions	24,158,	19,411,	19,051,	16,858,	13,147,
		63,242,	57,674,	59,025,	54,264,	46,345,
Remainder of Enumerated Articles		24,172,	39,580,	26,360,	35,373,	27,528,
TOTAL ENUMERATED IMPORTS		254,153,	253,015,	255,847,	249,675,	234,916,
Add for UNENUMERATED IMPORTS (say)		28,100,	28,500,	27,373,	26,500,	27,380,
TOTAL IMPORTS		282,255,	281,515,	283,220,	276,175,	262,296,

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* "Silk," inclusive of manufactured silk, "not made up."

EXPORTS. — (United Kingdom.) — **First Nine Months** (*January — September*), **1876-75-74-73-72.** — *Declared Real Value, at Port of Shipment, of Articles of* BRITISH *and* IRISH *Produce and Manufactures Exported from United Kingdom.*

(Nine Months.) [000's omitted.] BRITISH PRODUCE, &c., EXPORTED.		1876.	1875.	1874.	1873.	1872.
		£	£	£	£	£
MANFRS.—*Textile.*	Cotton Manufactures ..	41,422,	44,191,	45,121,	47,089,	47,467,
	,, Yarn	9,421,	9,834,	10,889,	11,735,	12,078,
	Woollen Manufactures	14,420,	17,007,	18,386,	20,343,	25,815,
	,, Yarn	3,194,	3,772,	4,062,	3,963,	4,543,
	Silk Manufactures	1,300,	1,321,	1,614,	1,438,	1,743,
	,, Yarn	843,	658,	820,	1,280,	1,343,
	Linen Manufactures	4,388,	5,706,	5,606,	5,867,	6,367,
	,, Yarn	1,285,	1,362,	1,305,	1,624,	1,520,
		76,273,	83,851,	87,803,	93,339,	100,876,
,, *Sewed.*	Apparel	2,092,	2,268,	2,259,	2,447,	2,170,
	Haberdy. and Mllnry.	2,922,	3,913,	4,718,	5,138,	5,097,
		5,014,	6,181,	6,977,	7,585,	7,267,
METALS, &c.	Hardware	2,653,	3,196,	3,269,	3,727,	3,684,
	Machinery	4,059,	6,949,	7,269,	7,397,	5,597,
	Iron	15,689,	20,019,	23,703,	29,144,	26,591,
	Copper and Brass	2,540,	2,771,	2,932,	2,794,	2,655,
	Lead and Tin	930,	1,030,	1,341,	1,167,	1,406,
	Coals and Culm	6,818,	7,329,	9,187,	9,924,	7,209,
		32,689,	41,294,	47,701,	54,153,	47,142,
Ceramic Manufcts.	Earthenware and Glass	1,966,	2,108,	2,203,	2,631,	2,258,
Indigenous Mnfrs. and Products.	Beer and Ale	1,455,	1,649,	1,921,	1,830,	1,530,
	Butter	150,	173,	184,	192,	219,
	Cheese	50,	61,	54,	55,	56,
	Candles	107,	126,	136,	157,	171,
	Salt	418,	515,	510,	607,	392,
	Spirits	222,	201,	118,	166,	164,
	Soda	1,627,	1,726,	1,965,	2,222,	1,814,
		4,029,	4,451,	4,888,	5,229,	4,346,
Various Manufcts.	Books, Printed	626,	946,	628,	661,	629,
	Furniture	—	—	—	—	—
	Leather Manufactures	2,184,	2,835,	2,573,	2,523,	2,668,
	Soap	228,	233,	199,	180,	228,
	Plate and Watches	158,	199,	181,	182,	143,
	Stationery	484,	496,	501,	490,	467,
		3,680,	4,709,	4,082,	4,036,	4,135,
Remainder of Enumerated Articles		14,624,	14,072,	14,666,	13,773,	12,667,
Unenumerated Articles		12,760,	12,700,	12,620,	12,930,	11,624,
TOTAL EXPORTS		123,651,	169,366,	180,940,	193,676,	190,315,

SHIPPING.—(United Kingdom.)—*Account of Tonnage of Vessels Entered and Cleared with Cargoes, from and to Various Countries, during the* **Nine Months** *ended September*, 1876-75-74.

Countries from whence Entered and to which Cleared.	Total British and Foreign.					
	1876.		1875.		1874.	
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.
FOREIGN COUNTRIES.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Russia { Northern ports	950,569	837,987	882,877	739,692	1,067,510	765,739
Russia { Southern ,, ...	206,406	150,747	345,669	130,914	180,561	134,982
Sweden	880,981	572,181	625,076	516,117	906,808	494,737
Norway	663,024	281,615	540,654	290,783	662,273	257,202
Denmark	168,538	475,541	139,189	450,469	116,813	410,773
Germany	1,097,390	1,849,417	1,117,209	1,806,056	1,173,670	1,718,882
Holland	818,192	948,558	770,573	820,536	663,887	753,718
Belgium	699,072	758,739	634,582	711,167	597,866	620,736
France	1,383,800	2,264,255	1,405,018	2,036,768	1,226,737	1,791,364
Spain	670,509	487,210	492,782	444,734	617,352	397,534
Portugal	157,531	258,937	202,204	242,774	212,166	225,470
Italy	231,850	723,995	233,430	672,732	173,038	577,141
Austrian territories	19,926	66,186	31,648	65,175	21,984	65,633
Greece	29,112	50,290	81,205	55,097	76,539	60,738
Turkey (including Wallachia and Moldavia)	401,168	246,312	208,045	236,724	178,530	282,257
Egypt	308,682	347,143	207,672	316,322	155,214	380,594
United States of America	3,121,615	1,584,252	2,485,977	1,454,432	2,820,377	1,630,979
Mexico, Foreign West Indies, and Central America	206,188	270,928	238,824	309,757	248,473	294,821
Brazil	152,238	321,745	204,257	338,343	176,611	377,595
Peru	214,140	66,491	165,093	97,198	190,547	63,213
Chili	51,896	182,590	49,730	208,810	81,300	194,444
China	99,320	18,670	94,704	21,913	68,440	14,655
Other countries	425,773	432,239	410,473	441,325	389,651	478,105
Total, Foreign Countries	12,957,920	13,196,028	11,566,891	12,407,845	12,016,427	11,991,312
BRITISH POSSESSIONS.						
North American Colonies	974,461	622,207	784,151	557,048	1,013,514	669,584
East Indies, including Ceylon, Singapore, and Mauritius	912,948	1,110,396	816,753	1,037,488	778,215	983,628
Australia and New Zealand	311,378	377,835	232,256	446,495	218,791	418,943
West Indies	200,378	110,529	221,639	114,958	186,696	90,800
Channel Islands	213,772	135,500	199,900	131,946	185,698	124,369
Other possessions	180,907	624,521	158,830	550,194	162,420	612,371
Total, British Possessions	2,793,844	2,980,988	2,413,529	2,838,129	2,545,234	2,899,695
TOTAL FOREIGN COUNTRIES AND BRITISH POSSESSIONS.						
Nine months ended September, { 1876	15,751,764	16,177,016	—	—	—	—
Nine months ended September, { '75.	—	—	13,980,420	15,245,974	—	—
Nine months ended September, { '74.	—	—	—	—	14,561,661	14,891,007

GOLD AND SILVER BULLION AND SPECIE. — IMPORTED AND EXPORTED. — (United Kingdom.) — *Declared Real Value for the* **Nine Months** (*January—September*), **1876-75-74.**

[000's omitted.]

	1876.		1875.		1874.	
(First Nine Months.)	Gold.	*Silver.*	Gold.	*Silver.*	Gold.	*Silver.*
Imported from—	£	£	£	£	£	£
Australia	2,876,	11,	4,342,	27,	4,759,	16
So. Amca., including Mexico and W. Indies	1,397,	2,094,	927,	2,493,	2,002,	2,775,
United States	4,347,	2,150,	8,227,	2,309,	3,216,	2,785,
	8,620,	4,255,	13,596,	4,829,	9,977,	5,576,
France	1,340,	963,	1,725,	1,098,	431,	893,
Germany, Holl. & Belg.	2,309,	3,700,	558,	806,	230,	1,834,
Prtgl., Spain, and Gbrltr.	509,	42,	81,	31,	57,	50,
Mlta. and Egypt	364,	17,	525,	19,	265,	22,
China, including Hong Kong	731,	16,	218,	56,	232,	231,
West Coast of Africa	118,	17,	97,	21,	106,	28,
All other Countries	4,764,	680,	2,138,	659,	1,058,	843,
Totals Imported	18,835,	9,690,	18,938,	7,519,	12,356,	9,477,
Exported to—						
France	1,740,	1,596,	3,359,	1,679,	3,426,	810,
Germany, Holl. & Belg.	1,158,	577,	3,253,	352,	1,015,	585,
Prtgl., Spain, and Gbrltr.	2,060,	197,	1,140,	800,	811,	1,645,
	4,958,	2,370,	7,752,	2,831,	5,252,	3,040,
Ind. and China	20,	6,095,*	—	—	1,331,	4,924,
United States	332,	1,	445,	89,	9,	24,
South Africa	230,	5,	—	10,	5,	11,
So. Amca., including Mexico and W. Indies	196,	—	635,	—	396,	—
All other Countries	1,522,	2,796,	1,279,	3,844,	1,334,	923,
Totals Exported	7,258,	8,897,	10,111,	6,774,	8,327,	8,922,

* This entry is now shown direct, instead of to Egypt as formerly.

REVENUE.—(United Kingdom.)—30th September, 1876-75-74-73.

Net Produce in Quarters *and* Years *ended 30th* Sept., 1876-75-74-73.

[000's omitted.]

QUARTERS, ended 30th Sept.	1876.	1875.	1876.		Corresponding Quarters.	
			Less.	More.	1874.	1873.
	£	£	£	£	£	£
Customs	4,843,	4,753,	—	90,	4,572,	5,012,
Excise	5,881,	5,746,	—	135,	5,437,	5,499,
Stamps	2,575,	2,508,	—	67,	2,448,	2,606,
Taxes	105,	105,	—	—	129,	90,
Post Office	1,521,	1,434,	—	87,	1,430,	1,872,
Telegraph Service	345,	320,	—	25,	300,	460,
	15,270,	14,866,	—	404,	14,316,	15,539,
Property Tax	342,	298,	—	44,	349,	457,
	15,612,	15,164,	—	448,	14,665,	15,996,
Crown Lands	82,	82,	—	—	72,	70,
Miscellaneous...........	1,041,	1,136,	95,	—	1,244,	1,276,
Totals	16,735,	16,382,	95,	448,	15,981,	17,342,
			Net Incr. £353,			

YEARS, ended 30th Sept.	1876.	1875.	1876.		Corresponding Years.	
			Less.	More.	1874.	1873.
	£	£	£	£	£	£
Customs	20,148,	19,594,	—	554,	19,612,	20,900,
Excise	27,933,	27,801,	—	132,	27,153,	26,109,
Stamps	11,049,	10,686,	—	363,	10,461,	10,415,
Taxes	2,488,	2,465,	—	23,	2,414,	2,359,
Post Office	5,929,	5,892,	—	37,	5,520,	5,472,
Telegraph Service	1,295,	1,140,	—	155,	1,250,	1,100,
	68,842,	67,578,	—	1,264,	66,410,	66,355,
Property Tax	4,025,	3,961,	—	64,	5,486,	6,933,
	72,867,	71,539,	—	1,328,	71,896,	73,288,
Crown Lands	400,	395,	—	5,	380,	375,
Miscellaneous...........	4,298,	3,983,	—	315,	3,690,	3,766,
Totals	77,565,	75,917,	—	1,648,	75,966,	77,429,
			Net Incr. £1,648,			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 30TH SEPT., 1876:—

An Account showing the REVENUE *and other* RECEIPTS *in the* QUARTER *ended* 30*th September*, 1876; *the* ISSUES *out of the same, and the Charges on the Consolidated Fund at that Date, and the Surplus or Deficiency of the Balance in the Exchequer on the* 30*th of September*, 1876, *in respect of such Charges.*

Received:—

		£
Income received, as shown in Account I		16,734,607
Amount raised on account of Military Barracks, per Act 35 and 36 Vict., cap. 68		250,000
Amount raised for Local Loans, by Exchequer Bonds		500,000
„ received in Repayment of Advances for Public Works, &c. ...		259,208
„ „ for Greenwich Hospital and School		58,300
Total		£17,802,115
Excess of the Sums charged on the Consolidated Fund on the 30th of September, 1876, payable in December quarter, 1876, above the Balance in the Exchequer at that date, viz.:—		
Excess of Charge in Great Britain	£3,943,930	
Surplus over Charge in Ireland	327,804	
Net deficiency		*3,616,126
		£21,418,241

Paid:—

			£
Net deficiency of the balance in the Exchequer to meet the charge on the 30th of June, 1876, as per last account			2,133,433
Amount applied out of the Income to *Supply Services*			11,798,854
„ advanced for Greenwich Hospital and School			58,300
Charge of the *Consolidated Fund* on the 30th of September, 1876, viz.:—			
Permanent Charge of Debt—			
Interest of the Permanent Debt	£4,635,357		
Terminable Annuities	753,611		
Interest of Exchequer Bills, &c.	24,574		
New Sinking Fund (on account)	200,000		
		5,613,542	
Interest on Local Loans		42,875	
„ &c., on Suez Canal Bonds		75,000	
Other Consolidated Fund Charges:—			
The Civil List	101,498		
Other Charges (including 250,000*l.* for Military Barracks)	521,322		
		622,820	
Principal of Exchequer Bills		7,700	
Advances for Public Works, &c.		1,065,717	
			7,427,654
Total			£21,418,241

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* Charge on 30th of September, 1876 (as above)	£7,427,654
Paid out of Growing Produce in September quarter, 1876	1,778,610
Portion of the Charge payable in December quarter, 1876	5,649,044
To meet which there was in the Exchequer on the 30th of September, 1876	2,032,918
Net deficiency as above	3,616,126

BRITISH CORN.—*Gazette Average Prices* (England and Wales), *Third Quarter of* 1876.

[This Table is communicated by the Statistical, Commercial, and Corn Department, Board of Trade.]

Weeks ended on Saturday.	Weekly Average. (Per Impl. Quarter.)					
	Wheat.		Barley.		Oats.	
1876.	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
July 1	48	10	34	6	28	11
„ 8	48	6	34	9	30	9
„ 15	48	5	32	3	30	1
„ 22	48	2	30	11	28	5
„ 29	47	5	31	4	31	2
Average for July	48	3	32	9	29	10
August 5	46	8	31	10	29	9
„ 12	45	10	32	2	29	5
„ 19	45	5	32	1	28	10
„ 26	46	4	32	7	28	1
Average for August	46	–	32	2	29	–
September 2	45	11	36	8	27	7
9	46	8	36	–	26	11
16	46	11	37	7	26	2
23	47	–	38	6	26	7
30	47	1	39	11	25	9
Average for September	46	8	37	8	26	7
Average for the quarter	47	1	34	4	28	5

BANK OF ENGLAND.—WEEKLY RETURN.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), for Wednesday in each Week, during the THIRD QUARTER (*July—September*) *of* 1876.

[0,000's omitted.]

1	2	3	4	5	6	7
ISSUE DEPARTMENT.					COLLATERAL COLUMNS.	
Liabilities.		Assets.				
Notes Issued.	DATES. (Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.	Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.
£ Mlns.	1876.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1876. Per cnt.
44,37	July 5	11,02	3,98	29,37	28,41	20 April 2
45,04	„ 12	11,02	3,98	30,04	28,27	
46,39	„ 19	11,02	3,98	31,39	28,36	
47,14	„ 26	11,02	3,98	32,14	27,32	
47,73	Aug. 2	11,02	3,98	32,73	28,94	
47,91	„ 9	11,02	3,98	32,91	28,92	
48,88	„ 16	11,02	3,98	33,88	28,58	
48,22	„ 23	11,02	3,98	33,22	28,22	
48,04	„ 30	11,02	3,98	33,04	29,09	
48,51	Sept. 6	11,02	3,98	33,51	28,18	
49,18	„ 13	11,02	3,98	34,18	27,88	
49,21	„ 20	11,02	3,98	34,21	27,78	
49,04	„ 27	11,02	3,98	34,05	27,97	

BANKING DEPARTMENT.

8	9	10	11	12	13	14	15	16	17	18
Liabilities.					DATES.	Assets.				Totals of Liabilities and Assets.
Capital and Rest.		Deposits.				Securities.		Reserve.		
Capital.	Rest.	Public.	Private.	Seven Day and other Bills.	(Wdnsdys.)	Government.	Other.	Notes.	Gold and Silver Coin.	
£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1876.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
14,55	3,25	8,78	22,71	,31	July 5	15,40	17,40	15,96	,82	49,58
14,55	3,30	4,81	27,64	,30	„ 12	15,40	17,49	16,77	,93	50,60
14,55	3,33	4,73	28,56	,31	„ 19	15,34	17,22	18,03	,91	51,49
14,55	3,34	4,98	28,96	,31	„ 26	15,41	17,01	18,82	,90	52,14
14,55	3,35	5,30	28,69	,32	Aug. 2	15,70	16,90	18,79	,83	52,22
14,55	3,37	5,44	27,99	,33	„ 9	15,62	16,18	18,99	,89	51,68
14,55	3,40	5,49	28,64	,36	„ 16	15,46	15,97	20,30	,72	52,45
14,55	3,38	5,31	28,25	,39	„ 23	15,26	15,95	20,00	,68	51,88
14,55	3,36	5,77	27,69	,36	„ 30	15,26	15,85	19,95	,67	51,73
14,55	3,68	5,97	28,00	,44	Sept. 6	15,26	16,40	20,33	,66	52,65
14,55	3,68	6,29	28,27	,42	„ 13	15,22	16,02	21,30	,67	53,21
14,55	3,69	6,59	28,28	,37	„ 20	15,30	16,02	21,43	,81	53,49
14,55	3,69	7,04	27,52	,36	„ 27	15,30	16,01	21,07	,78	53,16

LONDON CLEARING; CIRCULATION, PRIVATE AND PROVINCIAL.

The London Clearing, and the Average Amount of Promissory Notes in Circulation in ENGLAND *and* WALES *on Saturday in each Week during the* THIRD QUARTER *(July—September) of* 1876; *and in* SCOTLAND *and* IRELAND, *at the Three Dates, as under.*

[0,000's omitted.]

ENGLAND AND WALES.					SCOTLAND.				IRELAND.		
DATES. *Saturday.*	*London:* Cleared in each Week ended *Wednesday.**	Private Banks. (Fixed Issues, 3,81).	Joint Stock Banks. (Fixed Issues, 2,65).	TOTAL. (Fixed Issues, 6,46).	Weeks ended	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 2,75).	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 6,35).
1876.	£	£	£	£	1876.	£	£	£	£	£	£
July 1	73,43	2,36	2,19	4,55							
" 8	121,84	2,43	2,23	4,66	July 8	2,12	4,03	6,15	3,97	3,08	7,05
" 15	88,86	2,42	2,21	4,63							
" 22	101,66	2,39	2,17	4,56							
" 29	81,06	2,35	2,16	4,51							
Aug. 5	103,56	2,34	2,17	4,51	Aug. 5	2,03	3,96	5,99	3,91	2,99	6,90
" 12	82,67	2,33	2,17	4,50							
" 19	95,91	2,28	2,15	4,43							
" 26	81,56	2,26	2,12	4,38							
Sept. 2	71,22	2,28	2,13	4,41	Sept. 2	1,97	3,93	5,90	3,82	3,02	6,84
" 9	105,15	2,32	2,16	4,48							
" 16	72,40	2,34	2,18	4,52							
" 23	92,43	2,39	2,21	4,60							
" 30	73,14	2,47	2,24	4,72							

* The Wednesdays *preceding* the Saturdays.

FOREIGN EXCHANGES.—*Quotations as under,* LONDON *on Paris, Hamburg and Calcutta;—and New York, Calcutta, Hong Kong and Sydney, on* LONDON.

1	2	3	4	5	6	7	8	9
				Calcutta.				
DATES.	London on Paris. 3 m.d.	London on Hamburg. 3 m.d.	New York. 60 d. s.	India Council Demand Bills and Telegraphic Transfers.	Calcutta on London Bank Bills. 6 m. s.	Hong Kong. 6 m. d.	Sydney. 30 d. s.	Standard *Silver* in bars in London. pr. oz.
1876.			per. cnt.	*d.*	*d.*	*d.*	per cnt.	*d.*
July 1	25·50	20·72	4·87½	18½*	19¼*	47	—	50⅛
" 22	25·50	20·59	4·89	18⅝	19⅜	—	¾pm. ¼dis	48¼
Aug. 5	25·47½	20·66	4·88½	19⅝	20	44½	"	51½
" 19	25·45	20·68	4·87½	20½.	20¼	49	—	53½
Sept. 2	25·45	20·68	4·87½	19½	19⅞	—	1pm. ¼dis	51⅝
" 16	25·45	20·68	4·84	19⅝	20	51½	—	51¼

* These rates are for the nearest approximate dates.

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Statistisches Jahrbuch für das Jahr 1874. Heft ii, Herausgegeben von der K. K. Statistischen Central Commission. 51 pp., 8vo. Wien, 1876	Die Commission
Statistisches Handbüchlein der Stadt Prag für 1875. 140 pp., 8vo. Prag, 1876. 1 copy in German and 1 in Bohemian	Die Statistische Commission zu Prag
Association Française pour l'avancement des Sciences. Congrès de Nantes, 1875. Les Associations de prévoyance de l'Angleterre. Par M. Edward Brabrook. Scéance du 23 Août, 1875. 8 pp., 8vo. Paris, 1875	The Author
Exposé Statistique de l'organisation des Hôpitaux Civils en Danemark. Par P. A. Schleisner, M.D. Avec 9 Planches. 8vo. Copenhague, 1876	„
Journal de la Societé de Statistique de Paris. 17 Year. No. 9, Septembre 1876. 252 pp., 8vo. Paris, 1876. 10 copies	La Société
Mémoires et Comptes-Rendus de la Société des Sciences Medicales de Lyon. Tome xiv, 1874. 176 pp., 8vo. Lyon, 1875	„
Statistique Internationale. L'Administration de la Justice Civile et Commerciale en Europe, Legislation et Statistique. Par Emile Yvernès. 631 pp., 8vo. Paris, 1876	His Excellency the Minister of Justice, Paris
Hamburg's Handel und Schiffahrt, 1875. 212 pp., 4to. Hamburg, 1876	German Consul-General, London
Zeitschrift des K. Sächsischen Statistischen Bureaus. 22 Jahrgang 1876, hefte i and ii. 240 pp., 8vo. Dresden, 1876	Das Bureau
Bollettino Idrografico. Fascicolo No. 4. 4to. Roma, 1876	Il Ministero di Agricoltura, etc.
Annali del Ministero di Agricoltura, Industria e Commercio. Anno 1876. Primo Semestre. Numero 83. Statistica. 295 pp., 8vo. Roma, 1876	„
Relazione Statistica sulla Amministrazione della Giustizia nel Regno d'Italia per l'Anno 1873. Affari Civili e Commerciali. 91 pp., 4to. Roma, 1876	„
Duodecima Relazione sul Servizio Postale in Italia, 1874. 263 pp., 8vo. Roma, 1876	„
Camera dei Deputati. Relazione della Commissione Centrale di Sindicato sulla Amministrazione dell'Asse Ecclesiastico per l'Anno 1875. 303 pp., 8vo. Roma, 1876	„
Relazione Medica sulle Condizioni Sanitare dell' Esercito nell' Anno 1875. Agosto 1876. 79 pp., 8vo. Roma, 1876	„
Movimento Commerciale nel 1875. 342 pp., 4to. Firenze, 1876	Il Ministero delle Finanze
Fortegnelse over de Til Norges officielle Statistik henhorende Værker:— A. No. 1. Beretning om Skolevæsenets Tilstand i Landdistrikterne for Aaret 1874 „ 2. Fattigstatistik for Aaret 1872 „ 2. „ 1873 B. „ 1. Criminalstatistiske Tabeller for Aaret 1872 „ 1. „ '73	Le Bureau Central de Statistique du Royaume de Norvège, Christiania

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C. „ 1. Folkemængdens Bevægelse for Aaret 1871	
„ 3*b*. Tabeller vedkommende Norges Handel i Aarene 1873 og 1874	
„ 3*c*. Tabeller vedkommenne Norges Skibsfart i Aarene 1873 og 1874	
„ 5. Tabeller over de Spedalske i Norge i Aarene 1873 og 1874	
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Zeitschrift des K. Preussischen Statistischen Bureaus. 16 Jahrgang 1876. Heft i-ii, Januar—Juni. 263 pp., 4to. Berlin, 1876	M. le Dr. Engel
Léon Walras. Equations de l'Echange, equations de la Production. Extrait du Bulletin de la Société Vaudoise des Sciences naturelles. 63 pp., 8vo. Lausanne, 1876	The Author
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B. Rättsväsendet (Justice civile et criminelle), II, 1873; I, 1874	
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D. Fabriker och Manufakturer (Industrie), 1874	
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J. Telegrafväsendet (Télégraphes), 1875	
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Statistisk Tidskrift (Journal de Statistique), häft 42 to 45, 47	
Riksstat för år 1877 (Budget)	
Kapital-Konto till Rikshufvudboken (Comptes de l'état, extrait), 1864	
Generalsammandrag öfver Bevillningen (Impôts), 1874-75	
Riksbankens ställning (Banque de Suède), Sept.—Dec., 1875; Mars—Juin, 1876	
Riksbankens metalliska kassa (Banque de Suède), Août 1875; Juillet, 1876........	
Enskilda Bankernas månads-, qvartals- och årsredogörelser (Banques privées), Août, 1875; Août, 1876	
Hypoteksinrättningar (Crédit foncier), 1875	
Statistique Internationale: Etat de la Population, I Tableaux	
Congrès International de Statistique à Budapest, 1876. Eloge de L. A. J. Quetelet. Discours prononcé par M. E. Engel. 17 pp., 8vo. Berlin, 1876	W. Tayler, Esq., D.L.
Les Recidives de la Grande-Bretagne. Memoire presenté au Congrès International de Statistique à Budapest. Par W. Tayler, Esq., F.S.S. 7 pp., 8vo............	
Statistique des Grandes Villes. Première Section: Mouvement de la Population. Tome i. Rédigé par Joseph Körösi. 281 pp., 8vo. Budapest, 1876	
Congrès International de Statistique à Budapest, 1876. Programme I Section, Théorie et Population. 359 pp., 8vo. Budapest, 1876........	
Statistik der Preussischen Schwurgerichte für das Jahr 1855. Angefertigt im Königlichen Justiz Ministerium. 99 pp., 8vo. Berlin, 1856........	W. M. Tartt, Esq.
Haupt-Uebersicht der Geschäfte bei den Gerichten 1ster Instanz des Preussischen Staats; im Jahre 1851. Bei Professor Dieterici. 50 pp., 4to. Berlin	"
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Howard Association Report, September, 1876. 20 pp., 8vo. London, 1876	The Association
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Trade and Navigation Accounts. (Aug. to Nov., 1876)........	"
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Returns of Births, Deaths, and Marriages. Monthly and weekly current numbers	
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Quarterly Returns of Births, Deaths, and Marriages ending 30th September, 1876. 8vo. Dublin, 1876	
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Juland Danvers, Esq. Report to the Secretary of State for India in Council on Railways in India, 1875-76. 58 pp., 4to. London, 1876	The India Office
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Statistical Report of the Health of the Navy for the Year 1875. 596 pp., 8vo. London, 1876	Director-General of the Navy, Medical Department
The Journal of the Bombay Branch of the Royal Asiatic Society. No. 33, vol. xii. 218 pp., 4to. Bombay, 1876	The Society
Proceedings of the Asiatic Society of Bengal. Nos. 3 to 7 (March to July). 8vo. Calcutta, 1876	”
Journal of the Asiatic Society of Bengal. Vol. xlv, Part 1, No. 1; Part 2, Nos. 1, 2. 8vo. Calcutta, 1876	”
J. B. Russell, B.A., M.D. An Address delivered by, at the Opening of the Section of Public Medicine at the Annual Meeting of the British Medical Association in Sheffield, August, 1876. 23 pp., 8vo. Glasgow, 1876	The Author
New South Wales. Vital Statistics. Twentieth Annual Report of the Registrar-General. 59 pp., 4to. Sidney, 1876	The Registrar-General, Sidney
South Australia. Edited by William Harcus. Illustrated. 432 pp., 8vo. London, 1876	Agent-General of South Australia
Victoria. Statistical Register of the Colony of, for the Year 1875. Parts 1, 2, 4, and 5. Folio. Melbourne, 1876	Chief Secretary's Office, Victoria
New Zealand. Statistics of the Colony of, for the Year 1875. 264 pp., folio. Wellington, 1876	Dr. Hector, Wellington
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Report of the British Association for the Advancement of Science, Bristol, 1875. 295 pp., 8vo. London, 1876	The Association
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Medical Statistics of the Provost-Marshal-General's Bureau, vols. i and ii. 568 pp., map, and 767 pp., cloth, diagrams, &c., 4to. Washington, 1875	J. H. Baxter, A.M., M.D., Washington
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Twelfth Annual Report of the Board of State Charities of Massachusetts, and Reports from its Departments, with an Appendix, 1874-75. 265 pp., cloth, 8vo. Boston, 1876	"
Proceedings of the American Philosophical Society, January to June, 1876. Vol. xvi, No. 97. 276 pp., 8vo. Philadelphia, 1876	The Society
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Trade and Commerce of the City and Port of Bristol. By Leonard Bruton. 19 pp., 8vo. Clifton, 1876	The Author
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Report of the Sanitary Condition of Wandsworth District during the Year 1875. 73 pp., 8vo. London, 1876	"
King's College, London, Calendar 1876-77. 652 pp., cloth, 8vo. London, 1876	The College
University College, London, Calendar 1876-77. 338 pp., 8vo. London, 1876	"
Literary and Philosophical Society of Manchester:— Memoirs of, Third series, vol. v. 369 pp., cloth, 8vo. 1876 Proceedings of, Vol. xv. 184 pp., 8vo. 1876 Catalogue of the Books in the Library of, 173 pp., 8vo. 1876	The Society
Transactions of the Manchester Statistical Society. Session 1875-76. 302 pp., 8vo. 1876	"
The Journal of the Royal Agricultural Society of England. Second series, vol. xii, Part 2, No. 24. 599 pp., 8vo. London, 1876	"
Journal of the Royal United Service Institution. Vol. xx, No. 87. 592 pp., 8vo. London, 1876	The Institution
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Cleveland Institution of Engineers. Proceedings, 10th April, 1876. 84 pp., 8vo. London, 1876	The Institution
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Transactions of the Royal Irish Academy. Vol. xxiv, part 2; vol. xxvi, parts 1 to 5. 8vo. Dublin, 1876	,,
Record of Failures and Liquidations in the United Kingdom from January, 1865—July, 1876. By Richard Seyd, F.S.S. 528 pp., folio. London, 1876	The Author
The Boarding-out of Pauper Children in England. By William Tallack, Esq. 18 pp., 8vo. London, 1877. 2 copies.	,,
Mortality Tables of the City of Glasgow for the Quarter ending 30th June, 1876, with Remarks by Medical Officer. 15 pp., tables. 1876	The Medical Officer
Annual Report of the Local Taxation Committee, November, 1876. 19 pp., 8vo. London, 1876. 2 copies	Capt. P. G. Craigie
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INDEX TO VOL. XXXIX,

YEAR 1876.

PAGE

AGRICULTURAL STATISTICS of Great Britain and Ireland:
  population, area, acreage under crops, and live stock, 1874-75 . 254–9
  occupiers of land and owners of live stock, and average size of holdings, 1875 260
AGRICULTURE of Egypt (see *Egypt*) 220
ALGERIA. *Consul-General Playfair's Reports upon Algeria* . . 573
  Benefits derived from the French occupation 573
  Conquest in 1830; entire subjugation, 1857; riches of the Turkish treasury, state of the interior before and since the conquest 573
  Elements of exchange with Europe; cereals, &c.; plague of locusts, 1865-66; crops of 1867-72 574
  Value of the hard wheat for maccaroni, &c.; barley, vine cultivation, manufacture of essences, tobacco, &c. 574–5
  Cattle and sheep, amount of, and of their exportation 575
  The alfa fibre for paper making; forests, minerals, value of imports and exports 576–7
ANNUITIES, valuation tables of 513–15
ARMY MEDICAL STATISTICS. See *Contagious Diseases* Act.

BADENOCH (G. R.). *Remarks* in discussion (Skeats on Religious Institutions) 344
BALFOUR (T. G.). *Remarks* in discussion (Stansfeld on the Contagious Diseases Acts) 562–4
BANK CHARTER Act of 1844, cases of its abandonment in 1847, 1857, and in 1866 285–6
BANK NOTES, non-legal-tender note circulation of the United Kingdom (see *Dun*) 1
  question of the introduction of the Scotch system into England . 624
BANK RATE, number of changes in each year, 1844-73 . . . 290
  table of, &c., 1855-75 529
BANK OF ENGLAND, *tables* of its stock and dividends, and their valuation, 1694-1875 521–5
  decrease of its influence on the money market since 1844, and its inability in 1875 to control the market 281–2
  weekly return of the issue and banking departments:
    Fourth quarter, 1875 . 269 | Second quarter, 1876 . 613
    First ,, '76 . 436 | Third ,, . 763
BANKS, London clearing, and amounts of promissory notes in circulation (in England and Wales, Scotland and Ireland):
    Fourth quarter, 1875 . 270 | Second quarter, 1876 . 614
    First ,, '76 . 437 | Third ,, . 764
  the banking institution, bullion reserves, and non-legal-tender note circulation of the United Kingdom (see *Dun*) . . 1

PAGE

BANKS—*contd.*
  much increased amount of deposits as compared with growth of trade (from 70 millions in 1844 to 800 millions in 1872) . 278
  dividends and price of stocks, 1837-76, of the Bank, London and Westminster, and London and County Banks 530
  see *Clearing House.*
  FOREIGN, notes and bullion in, 1873-75 389
  (JOINT STOCK), enumeration and general review of (in tables) (see *Dun*) 9–37
  —— paid up capital of, in 1875, reserve funds, &c. 25, 32
  —— published balance sheets, 1873-74 38–63
  —— analysis of their liabilities and assets 64–98
  —— working expenses, profits, and yield to investors . . 99–110
  —— attempted estimate of total liabilities and assets . . 111–45
  —— non-legal-tender note circulation 145–66
  —— possible legislation on 167–88
BARONETCIES, 1830-74. See *Peerage* and Baronetcies.
BAXTER (Robert). *On the Principles which Regulate the Rate of Interest, and on the Currency Laws* 277

Contrast in high rates per cent. of 1866 and low of 1875 277
Increased amount of deposits in banks (from 70 millions in 1844 to 800 millions in 1872) and their employment in trade discounts 278
Growth of trade compared with deposits, showing great excess in the latter . 279
Excess of capital and consequent exceptionally low interest . . . 279
The remedial principle: deduction of allowance to depositors and consequent withdrawal of deposits, causing the rate to rise if left to law of supply and demand 279
Disturbing forces affecting this law: foreign demand for gold, and money market panic 280
Action of the bank in raising interest on a foreign demand for gold; its fallacy, as the call when confined to a few millions should be regarded as a regular occurrence, and not allowed to interfere with our trade . . . 280–81
—— case in 1875, when the bank was unable to control the market and raise the rate of discount 281–2
—— its influence gone now that it holds less than one-thirtieth of deposits, compared with 1844, when it held a fourth 282
Computation of the details of our currency (gold, notes, cheques, bills, &c.) as distinct from capital, and necessity for the bank treating differently foreign drains and home demands in cancelling notes presented for gold . 283–5
Effect of our currency law of 1844, and its abandonment in 1847, 1857, and in 1866 285–6
—— average stock of bullion for last ten years 286
Objection to the arbitrary raising of the rate of interest 286
Effects of a panic on the rate of interest and on the currency laws . . 287–9
Remedial measures: the disconnection of the issue from the banking department of the Bank of England, the holding to the non-issue of notes beyond 15 millions except on equivalent deposit of gold, with a power in drains of gold abroad or in panics to issue notes on deposit of Government stocks accompanied by bills carrying interest 289–90
—— the rate of interest to be fixed by a council of bankers . . . 290
Number of changes in rate in each year 1844-73 290
Amount of bullion held by other countries compared with their paper currency, December, 1875 290

Discussion on Mr. Baxter's Paper on the Rate of Interest:
  Dun (John)
    The amount of bankers' deposits used not above 500 millions, and their increase since 1844 in much the same ratio as that of trade; the average interest paid to depositors under 1 per cent. per annum; necessity of raising the rate of interest to stop foreign drains; bankers' deposits not capital; necessity for a reserve of 20 millions in order to work the Act of 1844; probable effects of Mr. Baxter's suggestion to transfer the issue department to the State; proposed monthly returns of reserves, &c. . . 291–3
  Chubb (Hammond)
    Doubtful use of the term "currency;" its proper use for gold alone, and all other forms, expedients for economising it; the foreign drain only when the foreigner had a right to demand it for debt due: the state which would be produced by Mr. Baxter's scheme already illustrated in the condition of Russia, the bank note not being worth its full value by 17 per cent.; Mr. Dun's suggestion that bankers should keep larger reserves, the probable course that should be taken 294–6

PAGE

BAXTER (Robert). *Discussion on his Paper—contd.*

Newmarch (William)

The balance of trade would bring the gold back, but it was connected with the rate of interest, which was affected by the bank rate; objection to the Bank Act of 1844; the issue of notes a function of banking of the same nature as deposit receipts; a larger central reserve of bullion wanted to bear the occasional strain put upon it; the abolition of the division of the two departments of the bank advocated, the tendency of modern commerce (assisted by the telegraph) to diminish drains 296–7

Baxter (Robert), reply:

His idea was to continue the issue department in the hands of the present managers under the Government; a crisis might be supposed in which the bankers might prefer to have their reserves in their own hands, and the bank reserve would then be entirely blotted out; the bank defeated in their endeavour to raise the rate of interest 298

BIRTHS, ILLEGITIMATE, rate per cent. in Scotland:

Quarter Dec., 1875 . 252 | Quarter June, 1876 . 602
„ March, '76 . 426 | „ Sept., „ . 753

BOOKS. *English Literature in* 1875 241

Analytical and summary *tables* of books published in 1875, with comparison of the numbers with those of 1874 241–3

BOURNE (Stephen). *Remarks* in discussion (Skeats on Religious Institutions) 348

BRITISH ASSOCIATION, Forty-Sixth Meeting, Glasgow, 1876, Economic Science and Statistical Section, Address of the President (see *Campbell*). 648

BROTHELS, reduction of, not shown to be directly or indirectly a consequence of the Contagious Diseases Acts 554–5

BROWN (Samuel), opinions in favour of congresses, as tending to improve scientific methods and plans of statistical research . . . 645

BULLION AND SPECIE, gold and silver imported and exported:

Jan.–Dec., 1873-75 . 265 | Jan.–June, 1874-76 . 609
Jan.–March, '74-76 . 432 | Jan.–Sept., „ . 759

BULLION reserves of the banks of the United Kingdoms (see *Dun*) 1

CAMPBELL (Sir George). *Address as President of the Economic Science and Statistical Section of the British Association for the Advancement of Science, at the Forty-Sixth Meeting at Glasgow, September,* 1876 648

Object of the association more scientific inquiry than political details. . 648

Instances of the abuse of statistics, and necessity for keeping to the inductive method 648-9

Instances of light thrown on our own institutions, past and present, by comparison with those existing among the people of India. . . 650

—— value of the old village community of India, and error of our introducing too much centralisation in its place. 651

—— the tenures of land there a picture of the rise and progress of property in land, all the stages of tenure occurring under the zemindar system . 651–2

—— gradual growth of the landholders' rent, and reduction of the State rent to a mere land tax 652

—— the small cultivation of India adopted by the emancipated Africans of the United States, and great increase of cotton produce under the system 652

Greater saving and economy among small proprietors and workers for themselves compared with hired labourers and mechanics, as instanced in the French small proprietors, the Irish farmer, the Indian ryot, Scotch weaver, &c.. 653–4

Poor laws only a necessity where there is much hired labour; out-door relief not to be too much restricted 654–5

The question of the future value of silver; its increased absorption by India not likely, for probably, as confidence in the British Government increases, its use will be superseded by "Government paper" . . . 655–6

Education: error of over-training the faculty most developed in a boy, and in which he needs it least 657

—— the mental difference between man and woman, necessitates employments for the latter in which they may avoid rivalry with man . . 657–8

PAGE

Campbell (Sir G). *Address as President of Economic Section—contd.*

- Stimulants and narcotics: singular instances in India of the confinement of certain stimulants to certain races (alcohol, opium, and tobacco) . . 658
- Advantages of the codification of laws and of assimilating the English and Scotch systems . . . 659
- Punishment: objections to severe flogging, and to too uniform a system of punishment and treatment of criminals . . . 659–60

Canal Companies, rates of dividend and prices of shares . . 494–5
see *Suez* Canal.

Canals, &c., on the valuation of (see *Farr*) . . . 464

Census. *The Census of British India of* 1871-72 [extracted from memorandum by H. Waterfield] . . . 411

- Reference to the earliest attempts to enumerate the people of India by Hamilton and Adam, 1820-35 . . . 411
- Tact required in dealing with the prejudices of the natives of India . . 411
- Area, density, and increase of population; houses, sexes . . . 412
- Over-estimate of loss of life in Orissa famine . . . 412
- Population classified according to religion, and distribution of the different creeds . . . 413–15
- Nationality and caste; aboriginal tribes and out-castes . . . 416

Chadwick (D.). *Remarks* in discussion (*Farr* on Valuation of Railways, &c.) . . . 531–2

Children (Factory), the physical requirements of (see *Roberts*) . 681
tables of the age, height, chest girth, and weight of boys and girls (urban and rural) between 8 and 14 (with analyses) . 690–731

Chubb (Harry). *The Supply of Gas to the Metropolis* . . . 350

- London supplied by six companies (amalgamated from thirteen), with seventeen manufactories and a capital of 11 millions . . . 350
- Amount used in the year, 13 millions of thousands of cubic feet . . 350
- 54,000 lamps in streets, and the mains 2,000 miles . . . 350
- First lamps used in Pall Mall in 1807, but the progress of gas opposed and checked for some years till lamps lighted on Westminster bridge in 1813 . 351
- Prejudices and difficulties encountered in its admission into dwellings . 352
- Establishment of the Chartered Gas Company in 1810, and dates of the incorporation of the other companies up to 1854 . . . 352
- Recommendation of Sir W. Congreve's commission in 1822 in favour of one company to one district not adopted, and competitive companies formed from 1830 to 1857 . . . 353
- Fallacy of cheapening gas by competition, and the price reduced since its abandonment . . . 354
- Obligations and restrictions as to prices, purity, and power of gas, dividend, &c., enforced by Gas Act of 1860 as conditions of monopoly . . 355
- Opposition of the Corporation and Board of Works to the companies and appointment of Lord Cardwell's committee, and threat of competition by the local authorities . . . 356–7
- Advance allowed by the commissioner in the coal famine of 1872-74, and resumption of the initial price of 3*s.* 9*d.* in January, 1875 . . . 357
- Bills of the Corporation and Board of Works in 1874-75, their unfairness towards and want of good faith with the companies . . . 358–9
- Constant attacks to be expected on the companies if their dividends increase and objections of the shareholders to lose the character of their investment of a guaranteed stock . . . 359–60
- Accusations brought against the companies shown to be groundless; their losses by bad debts and costs of collection; gas better and much cheaper in London than in any other city of the world . . . 361
- —— dearness of cannel coal, not allowing illuminating power to exceed sixteen candles . . . 362
- —— strictness of the referees, and severe penalties to which the companies are liable for the slightest infringement of the standards . . . 363
- —— the vestries more than the companies answerable for disturbance of roadways and defective lighting of public thoroughfares . . . 363
- —— the liability of meters to err is generally in favour of the consumer . 364
- —— strict official auditing of the companies' accounts by the Board of Trade 364
- The greatest demand for gas to be provided for on the day before Christmas Day . . . 364
- Gas not used by the working classes of London to the same extent as in Scotland and North of England . . . 365
- Gas at 3*s.* 9*d.* per 1,000 feet nine times as cheap as a dip candle giving the same light . . . 365
- The question of the gas supply being transferred to municipal authorities not objected to by the companies if their property is fairly purchased on equitable terms . . . 366
- Unfair terms for enforced sale proposed by the Metropolitan Board . . 366–7

PAGE

Chubb (Harry). *The Supply of Gas to the Metropolis—contd.*

Appendix of *tables:* share and loan capital of companies; prices charged by companies at their commencement 368
—— rates of dividend at commencement 369
—— total quantity of cannel produced in 1865 369
—— rate of increase in demand, 1850-74 (Imperial Gas Company) . . 370
—— comparative cost of different lighting materials. . . . 371

Discussion on Mr. Chubb's Paper:

Levi (Leone)

Question of the saving of office expenses by the purchase of the Companies' interest by the Corporation; 6 or 7, not 10, per cent. the dividend which had been usually divided; the paper too much from a monopolist point of view 372

Patterson (R. H.)

No gain probable from mere amalgamation of the Imperial and Chartered Companies under the municipality 372

Chubb (Harry)

Rates of dividend, culminating in 10 per cent., since 1860; proportion of directors' and clerks' salaries to charge per 1,000 feet of gas each about 0·40 of a penny; price in Manchester now less, but for many years much higher than in London; cheapness obtained by paying off capital with surplus profits, and thus reducing amount of interest required; the guaranteed dividend of 10 per cent. now arranged to rise or fall by ¼ per cent. per inverse ratio for each penny of fall or rise per 1,000 feet . 373–4

Clarke (Hyde)

The objections to gas at first not by men of science, but owing to statements of the projector, Mr. Windsor, proposing to abolish every vested interest; attempt for a short time to use portable gas; lately resumed for railway carriages 374–5

Livesey (George)

Notice of competition 1848-53, and attempts to reduce the price from 6*s.* to 4*s.*; objections to a guarantee of 10 per cent. as instanced in the coal famine, when the extra charge would be all laid on the consumers; though in railways there was reduction of dividends as well as increase of fares; number of the working classes supplied with two-light meters by the Manchester Corporation; the South Metropolitan Company, its mode of replacing its lost capital by surplus profits 375–7

Farr (William)

A probable saving of 800,000*l.* to consumers if the water and gas companies were in the hands of the Metropolitan Board 377

Doxey (Rev. —)

Prices charged by different companies during the coal famine, from 3*s.* to 5*s.*; advantage of the management by the Metropolitan Board . . . 378

Hedley (T. A.)

Instance of large profit on the shares of the London Gaslight Company from variation of price in thirty years from 2*l.* to 87*l.* per 50*l.* share; the illuminating power of gas increased by improvement in burners . . . 378

Smee (A. H.)

The hands of the committee appointed to fix the price of gas tied by the statutory dividend of 10 per cent. 379

Chubb (Harry), reply:

Little or no dividend of the other companies when prices reduced by the Central and Surrey Consumers' Companies; gas better now than twenty years ago 379

Chubb (Hammond). *Remarks* in discussion (Baxter on the Rate of Interest) 294–6
Remarks in discussion (Skeats on Religious Institutions) . . 348
Church Building and Restoration, aggregate sums spent in each diocese on, since 1840 340
Churches. See *Religious Worship* (places of).
Circulation. See *Currency, Banks.*
Clarke (Hyde). *Remarks* in discussion (Dilke on Paris) . . . 308
Remarks in discussion (Chubb on Supply of Gas) . . . 374–5
Clearing House. *The Bankers' Clearing House* 392

Table of percentage on annual totals passed on 4ths of the month, on the Stock Exchange account days, consols settling days, &c. . . . 392

PAGE

CLIMATE, rainfall and temperature of Egypt (see *Egypt*) . . . 219
COALS, high prices of, without deficient production, in 1873 . . 662–3
COMMERCE. *General Results of the Commercial and Financial History of* 1875 [from the "Economist"] 381

Severe character of the mercantile failures of 1875 in England, Europe, and America 381
Dishonest character of the securities of the smaller borrowing states, and repudiation by Turkey 381
Depression and constant strikes and disputes in the great trades . . 381
Causes of the recent commercial sufferings and changes, Franco-German war, railroad mania of United States and Russia, Suez Canal, and rise of prices and wages, 1871-73 382
France the country least affected by commercial misfortune . . 382
Average price of wheat, 1863-75; weather of 1875 cold and ungenial. . 383
Silver: *tables* of shipments to East, 1866-75, and gold and silver production, 1848-75 384
Cotton trade: *tables* of imports of raw cotton, exports of cotton cloth, &c., 1857-75 385–7
Increased production of gold, 1876. European rates of discount, 1871-75, and notes and bullion in leading foreign banks; large reserve of Bank of France 387–9
Railways: variation in value of railway stocks in 1875 . . . 390
Iron: fall of prices and reduction in wages, strikes, and reduction of wages to those of 1869 391

COMMERCE of Egypt (see *Egypt*) 222–3
COMPANIES (Commercial), valuation of the shares of, with prospective, deferred, increasing, decreasing, or terminating profits (see *Farr*) . 464
CONGRESSES (INTERNATIONAL PENITENTIARY), resolutions at, on judicial statistics, gaol statistics, &c. (see *Mouat* on Prison Statistics) . 312–25
CONGRESSES (STATISTICAL), see *Statistical* Congresses.
CONTAGIOUS DISEASES ACTS, on the validity of the annual Government statistics of their operation (see *Stansfeld*) 540
  dates when put in force at different stations, 1866-69 . . 545
  instances of the unreliable character of the statistics . . . 550–52
COPERNICUS, his endeavour to reform the coinage of Poland in the sixteenth century 621
CORN—
  average weekly prices (with monthly and quarterly averages):

Fourth quarter, 1875 .	268	Second quarter, 1876 .	612
First „ '76 .	435	Third „ .	762

COTTON MANUFACTURES, objection to import duties on, in India . 670
COTTON TRADE, *tables* of imports and exports, 1857-75 . . . 385–7
CRAIGIE (P. G.). Anomalies of county and borough gaols (Mouat on Prisons) 330
CRICKMAY (Herbert). *Remarks* in discussion (Dun on Banking Institutions) 196
CRIME, necessity for uniform international nomenclature of . . 311
CRIMINALS, objections to severe flogging of, and to too uniform a system of punishment of 659–60
CURRENCY, computation of the details of, as distinct from capital . 283
  our money transactions effected by 97 per cent. of cheques and bills, 2½ per cent. bank notes, and ½ per cent. of coin . . 624
CURRENCY LAWS, on the principles of our (see *Baxter*) . . . 277

DEATH RATE. See *Mortality, Registration.*
DILKE (Sir Charles W.). *On the Municipal Government of Paris* . 299

The houses of London (700,000) nearly ten times the number of those of Paris, but the Paris houses larger and divided into sets of apartments (800,000) 299
The religious census of Paris of little value 299
Administration or Government under the Préfet of the Seine and municipal council 299
Each of the twenty arrondissements has a mayor (under the chief mayor or préfet), a juge de paix, and four "commissaires de police" . . 300
Functions of the Préfet of the Seine and préfet of police . . . 300

PAGE

DILKE (Sir Charles W.). *Municipal Government of Paris—contd.*

The budget: taxation (independant of national taxes) 8 millions, or 4*l.* a-head for man, woman, and child 301
Heavy octroi duties: tax on market stalls and on lodgings . . . 301
Beet root spirit chiefly used in Paris, and increased use of coal . . 301
Postage of London high in favour of more thinly populated parts . . 301
Chief heads of expenditure of Paris 302
Police: excessive interference by, in details of life, but the restraint of adulteration of food, and of prostitution not really more effective than in London 302
Poor relief managed by a director-general of public assistance; the income from charitable estates and taxes above a million pounds sterling; number of persons relieved by the bureaux de bienfaisance . . . 303
—— hospitals, expense of the new Hotel Dieu; sale of landed property of the hospitals 303–4
Mont de Piété, water supply, &c. 304
Drainage, much inferior to that of London 305
The superficial extent of Paris in 1860 about that of Chelsea, and density of population from height of houses 305
Statistics of food supply and budget of 1875 306

Discussion on Sir. C. Dilke's Paper on Paris:

Purdy (F.)

Difficulties in comparing London and Paris, from the more gradual and practical growth of the former, and complication of its parishes and unions, 307. Question of inequalities of rating, *re* the London and St. Katherine's Docks, and improvement by the Metropolis Assessment Acts; complex varieties of jurisdictions as to water supply . . . 307–8

Clarke (Hyde)

The charges of management in Paris not greater than in London, and the question of area, the same 308

Lumley (W. G.)

Question of average number relieved by the bureaux 308

Hendriks (Frederick)

Few changes in the government of Paris since the first establishment of the "Preféсture de la Seine" in the first Revolution, and the present system organised by Frochot, the first préfet, 308. The population of Paris now three times as great as then, and its revenue increased forty-fold . 309

Farr (William)

No outlying district once added to the Registrar-General's reports removed since; area of London 122 square miles, four times that of Paris; growth of the outer ring and disorders there from want of municipal government, partly remedied by the Metropolitan Board . . . 310
Statistics of the paper, whence obtained 310

DISCOUNT, European rates of, 1871-75 388
see *Interest.*
DISEASES. See *Contagious Diseases.*
DOCK COMPANIES, range of dividends and value of shares . . 495
DOMESDAY BOOK. *The Domesday Book of* 1873 [summary digest by Frederick Purdy] 393

Introduction to the digest: rateable value of property as obtained by Sir G. C. Lewis, 62½ millions; relative amounts of landed property, dwelling houses, and other property; gross estimated rental 1840-74 . . 393–4
—— difficulties in obtaining accurately constructed parish maps . . 395
—— rateable value of lands, 1869-70, and rateable area in 1873 . . 396–7
—— the individual large owners of Rutland 398
—— totals of owners (1,100,000); extent of holdings and rental . . 398
Extracts from Mr. Lambert's explanatory statement 399–401
—— the information derived from the valuation lists prepared under the Union Assessment Committee Act of 1862 400
—— definition of ownership and amount of accuracy of return . . 401
Tables of landowners' return (classified topographically) . . . 402–5
—— large and small owners 404–7
—— landowners classed according to extent of holdings . . . 408
—— Mr. Goschen's return of the rateable value of lands, buildings, railways, mines, &c., 1870 409–10

DOXSEY (Rev. Mr.). *Remarks* in discussion (Chubb on Supply of Gas) 378
Remarks in discussion (Skeats on Religious Institutions) . . 347

PAGE

Drysdale (Charles R.). *Remarks* in discussion (Stansfeld on the Contagious Diseases Acts) 565–6

Ducane (Colonel). *Remarks* in discussion (Mouat on Prison Statistics) 326

Duff (M. E. Grant). *Opening Address of the President of Department IV, "Economy and Trade," of the National Association for the Promotion of Social Science, at the Nineteenth Congress, at Brighton, October,* 1875 198

- The special subject of the address; the condition and prospects of our commercial treaties 198
- Little success of free trade opinions abroad after the repeal of the corn laws in 1846 198
- Causes which induced Napoleon III to entertain the project of the treaty of 1860 199–200
- Objections of various parties to the treaty 200
- Benefits of the treaty in connection with the "most favoured nation" clause of other European treaties 201–2
- Large increase of our trade with different countries since the treaties . 202
- Parties to whom the treaties were unwelcome, and movement in Germany, Italy, &c., for setting them aside, described by Max Wirth, Bunsen, M. Stuart, &c. 203–7
- Evils of the octroi duties in Italy 206
- Proposal for a conference at Berlin, and question of lowering the duties on the wines of Portugal and Spain 208–10

Dun (John). *The Banking Institutions, Bullion Reserves, and Non-Legal-Tender Note Circulation of the United Kingdom Statistically Investigated* 1

- Enumeration and general review of joint stock banks (Tables I to XX) . 9
- —— number of joint stock banks in United Kingdom (116) . . . 9
- —— *tables* of London and London and provincial joint stock banks, date, capital, proprietors, shares, dividends, price, and yield, 1875 . . 10–11
- —— ditto, provincial English, 1875 12–17
- —— ditto, Scotch and Irish 18–19
- —— number of banks according to date of establishment . . . 20
- —— great lull in the establishment of joint stock banks between 1840-62, and increase in latter date under the limited liability principle . . 21
- —— number of banks (joint stock and private) existing, 1860-75 . . 22
- —— diminution of private banks since 1860; the failures of Overend, Gurney, and Co., and Barned, not due to the joint stock principle . . . 22
- —— increase of joint stock banks since 1860 22
- —— number of banks and bank offices, 1874, and proportions to inhabitants, compared with previous investigations 23–4
- —— paid-up capital of joint stock banks, 1875 25
- —— limited and unlimited banks; the Bank of England, of Ireland, and of Scotland, limited banks, &c. 26
- —— limited liability, its attractiveness to shareholders, but unfavourable from the creditor's point of view, unless with a substantial uncalled margin on the shares 27
- —— calls made in liquidation of failed banks. 28
- —— proportion of uncalled to paid-up capital in limited and unlimited banks 29–32
- —— reserve funds and paid-up capital, 1875; purposes of the former, its creation considered so essential that shares are issued at a premium to obtain it 32–3
- —— number of proprietors to population 34
- —— dividend per cent., premium per cent. on paid-up capital, and yield to investors 35–6
- —— circulation of notes of banks of issue 37
- Published balance sheets of joint stock banks, 1873-74, and *tables* of profits, dividends and prices (Tables XXI to XXXV) 38–60
- —— advantages of their publication in raising the value of the shares and their general reliability 60–62
- —— *pro forma* general balance sheet 63
- Analysis of liabilities (Tables XXXVI to XLIV) 64
- —— ratio of uncalled capital and of proprietors' funds to the liabilities to the public (*tables*, &c.) 64–9
- —— circumstances which should determine the ratio, lowest and highest ratios shown; and 15 to 20 per cent. considered a fair proportion for proprietors' funds 69–71
- —— money lodged; general *table*, number and amount of deposits in the national provincial and in the Scotch banks, showing their similar ratios . 72–3
- —— progress of money lodged: in joint stock banks and savings banks, 1844-74 74–5
- —— ditto in certain English and in Scotch and Irish banks, 1870-74. . 76–7
- —— acceptances, their classification, and legitimate or objectionable character; amounts of special banks (Joint Stock, Union, and City) . . 77–9

PAGE

Dun (John). *The Banking Institutions—contd.*

Analysis of liabilities, estimated distribution of items of liabilities . . 79–80
Analysis of assets (Tables XLV to XLVIII) 80
—— cash and surplus funds: five lines of defence against demands of customers: cash in hand and at call, available investments, notice-money, and bill case 80–82
—— objection to practice of rediscounting customers' bills . . . 82
—— three classes of English country banks 83
—— difficulties in analysing cash and surplus funds from the different systems adopted by different banks. 83
—— ratio of cash and Government securities to liabilities to the public . 84
—— names of the banks holding the highest and lowest ratio . . 84–5
—— a fair proportion—25 to 30 per cent. 85
—— money lent: customers' bills to be preferred to advances on accounts, the latter adopted by country more than by London banks. . . 85–6
—— —— securities on which usually lent by country banks . . . 86
—— proportion of bills to other advances: the two not usually distinguished in balance sheets 86–7
—— names of provincial joint stock banks which make the separation . 87
—— calculation from these data; that bills are 45 and advances 55 per cent. of the total of the two 87
—— practice of banks as to rebate 87–8
—— proportion of bills to advances on current accounts 88–90
—— property account and estimated distribution of items of assets . . 90–92
—— *tables* of English provincial joint stock and Scottish bank balance sheets 1856-66 and 1870 (Tables XLVI to XLVIII) 92–8
working expenses, profits, price and yield to investor . . . 99
—— charges on working expenses, ratio per cent. (Table XLIX) . . 99–100
—— profits: fallacy of the economists' and Mr. Gairdner's mode of calculating profit on cash deposits, and supposed gain by the adoption of the Scotch margin of profit 100–102
—— ratio of net profits to total resources, circumstances which modify rate of profit, &c. (Tables L to LII) 102–8
—— market price and yield to investors; considerations which regulate them (Table LIII) 109–10
—— attempted estimate of total banking liabilities and assets of the United Kingdom 111
—— those ascertained and those remaining to be estimated of the purely provincial joint stock banks 111
—— those of the purely provincial joint stock banks and the private banks without accessible balance sheets remaining to be estimated (Table LIV) . 111–15
—— discount houses and Bank of England 116
—— estimated total amount of bills in circulation 116–17
—— estimated total liabilities and assets of banks of United Kingdom (Table LV) 118
—— total banking liabilities, 782½ millions, compared with previous estimates (Table LVI) 120–21
—— relative weight of the Bank of England in the money market; its fall from 14 per cent. in 1850 to 9 per cent. in 1874; its secondary position as a lending bank and consequent loss of control of market discount rate . 121–3
—— money lodged with banks by the public, and deposits by banks with discount houses. 123–4
—— banking liabilities resting on Bank of England reserve . . . 124
—— constitution of our monetary system on credit culminating in the sole legal-tender reserve of the notes of the Bank of England . . . 125
—— panics, the suspension of the Bank Act in every panic, an argument against the Act itself; and the chief error of the bank, its allowing too great a fall of the reserve in its banking department 125–7
—— augmentation of bullion reserve necessary, but antagonistic to its private interests as a dividend-earning company 127
—— argument in favour of the leading London banks keeping their own legal tender reserves, from the altered relative position of the bank, on which they should not seek to fix the responsibility of keeping bullion for them . 128–30
—— proposed monthly returns of legal reserve by each bank, the reuniting of issue and banking departments, and legal provision for suspension of the Bank Act under certain conditions (with objections thereto) . . 131–3
—— proposed State department of issue, as the only practicable legislative solution of the difficulty 133
—— —— results in a larger reserve of bullion being held, and a Government support of banking and general credit 134
—— —— objections of Mr. Bagehot and reply 134–5
—— suggestions that for the present the great London banks should hold their own reserves, instead of leaning on the Bank of England . . 135
—— balance sheets, dividends, and prices of purely provincial and of London and provincial joint stock banks, 1873 (Tables LVIII to LXIII) . . 136–45
Non-legal-tender note circulation: question of confining the operations of the Scotch banks (with issue privilege) to their own country . . . 145–6
—— statutory conditions of non-legal-tender note circulation in England and Wales, lapsed issues, &c. (Tables LXIV and LXV) . . . 146–9
—— amount lapsed showing stability of the English country issues . . 149
—— ditto in Scotland and Ireland 149–51

PAGE

DUN (John). *The Banking Institutions—contd.*

Non-legal-tender note circulation: advantages of Scotch and Irish banks of issue over English country banks of issue (in note circulation under 5*l*., &c.) 151–2
—— average excess of issue and coin held in Scotch and Irish banks, 1874 (Table LXVI) 153
—— returns of English banks on basis of monthly average of daily circulation; of Scotch and Irish, of weekly circulation 153
—— consolidation of issues prevented in England, but not in Scotland and Ireland, leading to forfeiture of large portion in the former country . 154
—— distribution and position of non-legal-tender note circulation in United Kingdom (Tables LXVII to LXXV) 155–66
Possible legislation: to abolish all non-legal-tender issues, and to confine the note circulation to State banks in each kingdom, or to reform present system 167
—— small proportion of bankruptcies among banks of issue (Table LXXVI) . 167
—— objections to Sir R. Peel's views and prejudices against private issues . 167–8
—— decline in use of country notes since development of the cheque system 168
—— non-legal-tender issues supplementary and non-antagonistic to a legal-tender Government issue 169
—— profit to the State of transference of the country issues to the Bank of England, but compensation necessary, otherwise it would be confiscation . 170–72
—— direct and indirect value to the country bankers of their local issues . 170–71
—— special merits of the country bank system: ready convertibility, freedom from forgery, cheapness of banking to the public, extension of banking benefits and relief of Bank of England from periodical strain . . 172–4
—— extracts from Mr. Seebohm's evidence 171–4
—— statements showing the annual value of the Scotch and Irish circulation to the respective banks, and the profit to the State of their suppression totally inadequate to meet the compensation which would be required . 175–6
—— retention and proposed reform of non-legal-tender issues: means of remedying their sole defect of insufficient security 176–80
—— proposed extension of non-legal-tender issues, its probable effects on the Bank of England and in the Scotch and Irish banks, its creation of a separate issue department in each bank of issue, &c. 180–85
—— the intrusion of the Scotch banks into England, its injustice to the English banker and prejudicial character to the interests of the Scottish public 186–9
—— progress of Scotch banking, 1845-75 (Table LXXVII) . . . 188

Discussion on Mr. Dun's Paper:

Newmarch (Wm.)

Value and completeness of Mr. Dun's paper; notice of previous papers by Mr. Newmarch and Mr. Palgrave on the same subject; progressive changes in the relative resources of the Bank of England and London and county banks, 190–91. Small proportion of amounts of bank circulation to bank resources, 191. The gradual conversion of joint stock banks, by increase of deposits, into investment companies, 191–2. Necessity for a Royal Commission to inquire into the Acts of 1819 and 1844, as applicable to the present increased amount of banking liabilities 192–3

Tayler (W.)

Instances of large losses incurred by banks, their large liabilities and want of inquiry by proprietors, and necessity for legislation to compel statements in more detail 193

Noble (B.)

The amount of gold in the Bank of England not the basis upon which our banking system is founded 194

Pattison (W. R.)

Necessity for a Royal Commission; the gold in the bank the only available supply for other banks; great risk of immense premiums on shares, and wisdom of a 10 per cent. dividend as a maximum in improving the class of proprietors; importance of increasing the balances of bankers at the Bank of England, on the understanding that they were not to be used in competition against them 194–5

Martin (R. B.)

Benefits of banks withdrawing and locking up any excess of balance exceeding a maximum, and danger of their regularly accepting bills . 195–6

Hamilton (Archibald)

Argument in favour of limited liability, and the greater distribution of the excessive deposits in the three principal joint stock banks . . . 196

Crickmay (Herbert)

Mr. Newmarch's statement of the decline of the bank in capital and liabilities requires modification; objection to the large mass of deposits in the joint stock banks. 196

PAGE

Dun (John). *Discussion on his Paper—contd.*
  Dun (John)
    Necessity for a greater cash reserve in joint stock banks to stem the beginnings of distrust and to prevent panic; proposal to draw up a form of annual balance sheet to be published 196–7
  Heywood (James)
    Necessity for greater supervision over advances, &c., by the leading directors of banks 197

Dun (John). *Remarks* in discussion (Baxter on the Rate of Interest) 291–3
Duties, octroi, in Italy, evils of 206
  octroi, &c., of Paris 301
  on wines of Portugal and Spain, question of lowering 208–10

Egypt. *The Climate, Agriculture, Commerce, &c., of Egypt* 218
  From the "Statistique de l'Egypte," and the reports of British consuls 218
  Increase of population, 1861-71, annual death rates, &c. 218
  The rainfall, 1798-1872, showing no increase by the extensive planting of trees and making of canals 219
  Average monthly temperature at Alexandria and Cairo, healthy and unhealthy periods, &c. 219
  Acres under cultivation, modes of irrigation, necessity of maintaining the canals, &c. 220
  Three systems of cultivation adopted: by hired labour, by share of profits, or by letting the land to the peasants 220
  System of compounding for taxes by paying those for twelve years in six 220
  Principal crops, trees growing, animals used in agriculture, and poultry 221
  Cultivation of the sugar cane, and establishment of sugar factories 222
  Division of the land by the Khedive into six dairas among his sons, &c. 222
  Comparison of the commerce of 1853-62 and 1863-72. 222
  Exports of cotton, sugar, &c.; value of imports, &c. 223
  Establishment of primary and of female schools 223

Elliott (Sir G.). *Remarks* in discussion (Skeats on Religious Institutions) 346
Elliott (J. H.). *Remarks* in discussion (Mouat on Prison Statistics) 328
Exchanges (Foreign), quotations on London, &c.:

Oct.–Dec.,	1875	270	April–June,	1876	614
Jan.–March,	'76	437	July–Sept.,	„	764

Exports, United Kingdom:

Jan.–Dec.,	1871-75	263	Jan.–June,	1872-76	607
Jan.–March,	'72-76	430	Jan.–Sept.,	„	757

Factories. See *Children* (Factory).
Farr (William). *On the Valuation of Railways, Telegraphs, Water Companies, Canals, and other Commercial Concerns, with Prospective, Deferred, Increasing, Decreasing, or Terminating Profits* 464
  Part I: origin of the paper from the discussion on Mr. Martin's paper on the purchase of railways by the State 464
  The question of purchasing not by capitalising the dividend ruling, but by compensation for loss of prospective increase of profits 464–5
  Value: its origin in covetousness; analysis, ethical and linguistic, of the latter word 466 (*and note*)
  —— statements of the natural history and growth of exchange 467–72
  —— comparative prices of a ton of eight articles: gold, wheat, iron, coal, &c. 468
  —— an economic value in things independent of good or evil, the evil being in the excess or abuse 469
  —— values as fixed by differences of opinion and abilities to purchase, as shown in the auction room 470
  —— value divested of accessories, and affected by mental impressions, as shown on the stock exchange 471
  —— value as affected by time and the doctrine of probabilities 471–2
  Interest and discount: statement of the greater profits of the latter at the same rate; rate of dividend inclusive of insurance premiums to cover risk 472–3
  —— instances of various rates of interest, and probable reasons for their variation 474

PAGE

FARR (William). *The Valuation of Railways, &c.—contd.*

Railways, valuation of stock: the method illustrated by the case of the London and North-Western Railway, in which the prices on the Stock Exchange are shown to be often much above or below the true value estimated 475–6
—— amounts of capital and rate of dividend, with calculation of probable future dividends and price of stock 477
—— case of the London, Chatham, and Dover Railway, its excessive cost per mile, capital, and revenue; prices of ordinary and preference stock, and calculation of its future dividends 478–9
—— total capital and receipts of the railways; large number of different stocks and its injurious influence on their value 480
—— question of State purchase; principles on which to be based, and terms of purchase 481
—— great profits or losses made on a rise or fall of 1*l.* in dividend, but the average market price of years closely agrees with the estimated true value, which does not rise or fall suddenly 481–2
—— modes which must be adopted for valuation for State purchase . . 483
Telegraph companies: valuation of stock of, illustrated by the purchase of the Electric and International Telegraph Company 484
—— capital of the company, successive dividends 1858-68; price in the market worth fourteen years' purchase, but bought by the Government at twenty years' purchase 484–5
—— excessive claims of the Great Eastern and other railways, and the payment to them only justified on the penny postage principle of the sacrifice of revenue for the benefits of cheap telegraphy 486–7
Water companies: successive supplies of London from Tyburn, London Bridge, and the New River (1613); origin and history of the latter; its capital and dividends (the first in 1633 at 15*l.* per share, and gradual increase after 1640 to 850*l.* per share in 1861) 487–91
—— comparative calculation and estimated increment of dividend for distant years 489–90
—— origin and areas of other companies, schemes of Mr. Bateman and Mr. Chadwick, &c. 491–2
—— elements to be considered in the valuation of the shares of companies, considering their probable cessation as monopolies 493
Canal companies: notes of rates of dividend and prices of shares at different dates of Regent's, Birmingham, Leeds, and Liverpool canals . . 494–5
Navigation and dock companies: range of dividends and valuation of shares. 495
Irrigation, drainage, and sewage companies: Government irrigation canals of India; drainage and sewage difficulties still unsolved . . . 495–6
Suez Canal: its capital and dividends; purchase of nearly half the shares by the British Government; favourable calculations of the value of the investment, &c. 497–8
—— value of the shares and dividends, capital engaged, and operation of the sinking fund, compared with terminable annuities 499–502
—— outline of the bold and skilful financial scheme adopted. . . 502–3
Gas companies: capital and revenues in London, points to be considered as to value of capital in a scheme of compensation if the gas supply is undertaken by the Board of Works 504–5
Part II: description of Tables I to V, and explanation of formulæ used . 506–9
—— dividends increasing in geometrical progression, and value of dividends at determinable and at varying risks 510–12
Tables (Part III): valuation *tables* of 1*l.*, of annuity of 1*l.*, and of an ascending annuity from 1*l.*, payable at the end of *x* years. . . . 513–15
—— of railways (London and North-Western), dividends and prices of stock and their valuation 516–19
—— London Waterworks, ditto 520–21
—— Bank of England, stock and dividends, 1694-1875, ditto . . 521–5
—— Three per cent. consols, 1789-1875, ditto 526–8
—— ditto, bank rate, and prices of wheat and meat, 1855-75 . . 529
—— dividends and prices of stock of the Bank, London and Westminster and London and County Banks, 1837-76 530

Discussion on Dr. Farr's Paper:

Chadwick (D.)

Exorbitant character of the payment made by the Government for the telegraphs; repeated in that for the Suez Canal shares; fraud of licensed valuers in over valuing property; value of a trade to be estimated on its profit-producing capacity 531–2

Martin (J. B.)

Interest on land not more than 3 per cent.; difference between real and calculated values of London and North-Western Railway stock, and the causes; may not railways yet be supplanted by a more economical mode of conveyance? 532–3

Purdy (F.)

Rateable value of railways supplied to the Crown a million more than that returned to the local authorities; doubt as to any valuations of the future 533

PAGE

Farr (William). *Discussion on his Paper—contd.*

Hendriks (F.)

Dr. Farr's paper an excellent *résumé* of the mathematical principles for calculating future income; case of the purchase of metropolitan bridges by the corporation, in which the law of geometrical progression was fairly applied; the same law not applicable to railways, in which prospective expenses might increase as well as receipts; the value of future incomes resting on Government security much shaken by recent events in France, Spain, &c. 533–5

Walford (C.)

The natural growth of a tree taken at 4 per cent. per annum, as an illustration of the natural "rate of increase;" necessity for preparing for knowledge of the real value of railways to meet the exactions of the railway interest in the case of State purchase 536

Vigers (Robert)

Difficulties in railway valuation for assessment from the number and variation of parishes; causes of the difference between parochial and Government valuations of property (their rateable and gross values); railway valuation should be on the net income it was producing; some of the sums mentioned as to the purchase of telegraphs, were large claims which were materially reduced 536–7

Fisher (J.)

The cause of the difference between Government and parochial taxation was that the State taxed the whole profit, while the parish could only tax the profit or rent of the land (with table of figures) 538

Farr (William)

His tables made to test the value of an increase of dividend and to show the effect of dividends either stationary, increasing, or decreasing, in arithmetical progression 538

Heywood (James)

The parochial scale of rating railways adopted from the objection of the companies to the mileage scale 539

Farr (William). *Remarks* in discussion (Dilke on Paris) . . 310
ditto (Mouat on Prison Statistics) 329
ditto (Skeats on Religious Institutions) 346
ditto (Chubb on Supply of Gas) 377
ditto (Stansfeld on the Contagious Diseases Acts) . . . 571

Feet, prevalence of flat-foot among factory children . . . 692

Finance, history of, 1875. See *Commerce.*

Fires. *Fires in London during* 1875, *and the Metropolitan Fire Brigade* 238

Selected from Captain Shaw's annual report; number of fires, persons injured, lives lost, strength of the brigade, classification of fires according to trades, causes of fires, and fires each day of the week . . . 238–41

Fish, prohibitory duties on, in France, none in Holland and Belgium 666–7

Fisher (J.). *Remarks* in discussion (Farr on Valuation of Railways) 538

France, its prosperity since its conquest by Germany contrasted with the distress in Germany 671–2

Free Trade, its present position, with the approaching expiration of European treaties, &c. 664–5
little success of, after repeal of corn laws in 1846 . . . 198

Funds, public, *tables* of prices and valuation of 3 per cent. consols, 1789-1875 526–8

Gas, the supply of, to the metropolis (see *Chubb*) 350
comparative cost of, with other materials 365, 371
amount used in London in the year, 13 millions of thousands of cubic feet, 54,000 lamps in streets, and 2,000 miles of mains . 350

Gas Companies, capital and revenues in London, &c. . . . 504–5

Gas Company, the Chartered, established in 1810, and dates of incorporation of other companies to 1854 352

Gas Meters, their liability to err in favour of consumer . . 364

Giffen (Robert). See *Silver* (depreciation of).

PAGE

GLOVER (John). *Remarks* in discussion (Skeats on Religious Institutions) 344–5
GOLD, production of, 1848-75, and increased production in 1876 . 384, 387
GONORRHŒA, no beneficial effect on, from the Contagious Diseases Acts 544
GUY (W. A.). *Remarks* in discussion (Mouat on Prison Statistics) . 326
ditto (Stansfeld on the Contagious Diseases Acts) . . . 571

HAMILTON (Archibald), *Remarks* in discussion (Dun on Banking Institutions) 196
HAMMICK (J. T.). *Remarks* in discussion (Mouat on Prisons) . . 330
HARRIS (Captain), his statement relative to the reduction of prostitutes objected to 557–8
HEDLEY (T. A.). *Remarks* in discussion (Chubb on Supply of Gas) 378
HENDRIKS (Fred.). *Remarks* in discussion (Dilke on Paris) . . 308–9
ditto (Parr on Valuation of Railways) 533–5
HEYWOOD (James). *Opening Address as President of the Statistical Society, November*, 1876 621

Notice of the death of members of the Society: M. Wolowski, Earl Stanhope, and Count de Ripalda 621–2
Notice of Copernicus' endeavour to reform the coinage of Poland in the sixteenth century 621
Large withdrawal of gold from the Bank for Germany, November, 1876 . 623
Question of the introduction of the Scotch bank note system into England . 624
Our money transactions effected by 97 per cent. of cheques and bills, and 2½ per cent. bank notes, and ½ per cent. of coin 624
Enormous extent of the services of the Post Office 624–5
Question of reduction of College Fellowships in the Universities; subjects studied at Owen's College, Manchester, &c. 625
School Board: ignorance of children over 7 years of age, and highest knowledge found in the lowest districts 625–6
Howard prize essays: prize awarded to Dr. Steele, of Guy's Hospital, &c. . 626

Remarks in discussion (Dun on Banking Institutions) . . . 197
ditto (Mouat on Prison Statistics) 328
ditto (Farr on Valuation of Railways) 539
HOWARD PRIZE ESSAYS, prize awarded to Dr. Steele 626
HUNGARY. *Hungarian Statistics.* [Communicated by an English member of the International Statistical Congress of Buda-Pesth.] . 734

Extracted from a work by Keleti and L. Beöthy 734
Area and population (15 millions), births and deaths, sex and religious divisions 734–5
Occupations, chiefly agricultural; marriage, birth, and death rates, and comparison of the latter with that of other countries 735–6
Agricultural, wine, and mining statistics; imports and exports . . 736–7
Railways, postal statistics, banks, judicial statistics 738
Education, finances, great increase of debt since 1867 . . . 739
Proposal for the adoption of the English language by the Hungarians, and its advantages to them 739

IMPORTS, United Kingdom:

Jan.–Dec., 1871-75 . 262 | Jan.–June, 1872-76 . 606
Jan.–Mar., '72-76 . 429 | Jan.–Sept., ,, . 756

INDIA, area, density of population, classified according to religion, &c. 412–15
people of, instances of light thrown on our institutions past and present, by those existing among them 650
value of the old village community of, the zemindar system of tenure of land, &c. 651–2
population. See *Census* of India.
INTEREST, principles which regulate the rate of (see *Baxter*) . . 277
and DISCOUNT, instances of various rates of; greater profit of the latter, &c. 472–4
IRELAND, few peasant proprietors of, in a population almost wholly agricultural 674–6

PAGE

Iron Trade, fall of prices, reduction in wages, strikes, &c., in 391
Irrigation, drainage and sewage companies 495-6

Keleti and Beöthy on Hungarian Statistics. See *Hungary.*

Land Laws. *Some Remarks on the Land Laws of England* [by George Warde Norman] 211

- The paper a criticism on Sir G. Campbell's address to the Social Science Association, at Glasgow, 1874, in vol. xxxvii of the *Journal.* 211
- Error of Sir George as to land being the property of the nation, derived from his India experience, where the State is the general landlord 211
- Property in land, like all other property, the creation of law 212
- Mr. Mill's "unearned increment" as applicable to stocks and shares as to land 212
- The changes of the fifteenth and sixteenth centuries comprised an eviction of cottier tenants and conversion of the land into pastures, contributing causes towards the Poor Law of 43rd Elizabeth, but having no relation to existing landowners. 213
- The law of primogeniture might be abrogated in cases of intestacy, but the latter are rare, and the change would have little practical effect 214
- The poverty of a young man living on a few acres of land the value of which, if sold, would set him up in a good business, the cause that peasant proprietors are but few 214
- Land in England cheaper than in France, and the average crop of wheat and number of animals per acre in the latter only half that of England 214
- The real cause of want of good dwellings for the working class, the absence of desire for them by that class, and necessity for spreading a sense of decency on this point 214-15
- English entails do not on an average exist more than thirty years, and an equivalent of them exists as to personalty in shares 215
- Case showing the injustice of special taxes on land 216
- Argument not untenable that houses built to last some fifty or sixty years only, admit more readily of improvements 216
- The system where owner and occupier are different persons the most convenient 217
- The tenant system of England has arisen in the natural course of things, and England is the best cultivated country in Europe, and the continental districts renowned for productiveness are also in the hands of tenants 217
- Objections to tenant-right claims for unexhausted improvements, and the present relations of landlord and tenant based upon contract the best for all parties 217-18

Landed Property. See *Domesday Book*, and above *Land Laws.*
- rateable value of, 1869-70 and 1873 396-7
- totals of owners of (1,100,000) 398
- *tables* of owners of, &c. 402-8
- greater saving and economy among small proprietors of, than among hired labourers 653-4
- analysis of returns of those of Great Britain compared with France 673-5
- consideration of the question of proprietary *versus* tenant farmers in Great Britain and France, and incentive to industry and thrift of the individual ownership of land 677-9
- compulsory division of, in France, universal, except among the nobility before the Revolution 678

Language (English), proposal for its adoption by the Hungarians 739
Laws, advantages of the codification of, and assimilation of the English and Scotch systems 659
- (Land). See *Land Laws* of England.

Lawson (Robert). *Remarks* in discussion (Stansfeld on the Contagious Diseases Acts) 568-9
Lefevre (G. J. Shaw). *Address as President of the Department of Economy and Trade of the National Association for the Promotion of Social Science at the Twentieth Annual Congress, at Liverpool, October,* 1876 661

- Summary of questions connected with the present depressed state of trade 661
- Similar period in 1868-70 succeeded by a rebound of prosperity 662

PAGE

LEFEVRE (G. J. SHAW). *Address as President—contd.*

- The coal famine prices in 1873 without deficient production, their injury to the iron manufacture, &c. 662–3
- Low prices, decrease of pauperism, increase of third class traffic and other points favourable to the working classes 663
- Greater loss and suffering to the working classes in the United States than in this country, in the present state of trade, from their system of protection 663
- Present position of free trade, approaching expiration of European commercial treaties and attempts to hinder their renewal, which will probably be defeated 664–5
- Moderate protective duties still levied in every European country . . 665
- Salt, large export from the Mersey; large import duties imposed by France, Germany, Denmark, Spain, and the United States; large exports to Bengal, but none to Madras and Bombay, where duties exist . . . 666
- Fish, prohibitory duties in France; Holland and Belgium the only countries without import duty 666–7
- Instances showing that no industries have really suffered from free trade and competition 667–8
- Opinions of Mr. David Wells showing the injurious effects of the protective system to the industries of the United States 668–9
- Objection to import duties on cotton manufactures in India . . . 670
- Relative increase of our trade with European countries in inverse ratio to tariff duties. 670
- The singular contrast between the prosperity of conquered France and the distress in conquering Germany, explained by the saving and industry of the French, and the wide distribution of property among them . . 671–2
- Analysis of the returns of landed proprietors in England, Ireland, and Scotland compared with those of France 673–5
- Serious condition of Ireland with its population almost wholly employed in agriculture in having so few peasant proprietors, and recent efforts to increase them under the Irish Church Act, &c. 674–6
- Consideration of the question of proprietary *versus* tenant farmers; the laws and custom of our country favourable to aggregation of land, from the expensive process of its transfer, &c. 677
- Recommendations in favour of equal partition on intestacy, restriction of settlements to one generation, easy registration, &c., but with freedom of willing 678
- The compulsory division of property in France founded on custom, and universal except among the nobility before the revolution . . . 678
- Equal partition among children almost universal in the United States, though freedom of bequest is preserved 679
- Individual ownership of land as an incentive to industry and thrift, the best promoter of civilisation 679

LEVI (Leone). *Remarks* in discussion (Chubb on the Supply of Gas) 372

LIBRARY of the Society, additions to, in 1876 . . . . . 271–6, 438–43, 615–19, 765–70

LITERATURE. See *Books.*

LIVESEY (George). *Remarks* in discussion (Chubb on Supply of Gas) 375–7

LOCUSTS, plague of, in Algeria, 1865-66 574

LONDON, the houses of (700,000) ten times those of Paris, but the houses of Paris are larger and divided into 800,000 sets of apartments 299
  see *Fires* in.

LONG (J.). *Remarks* in discussion (Mouat on Prisons) . . . 330

LUMLEY (W. G.). *Remarks* in discussion (Dilke on Paris) . . 308
  ditto (Skeats on Religious Institutions) 344

LUNACY (CRIMINAL), question of statistics of 319–20

MCKENZIE (J. H.). *Remarks* on Pew Rents (Skeats on Religious Institutions) 345

MARINE LOSSES. See *Shipwrecks.*

MARRIAGES. See *Registration* of.

MARTIN (J. B.) *Remarks* in discussion (Farr on Valuation of Railways) 532–3

MARTIN (R. B.). *Remarks* in discussion (Dun on Banking Institutions) 195–6

PAGE

METEOROLOGY—
mean temperature and rainfall in twenty-three large towns:

Fourth quarter, 1875 .	247	Second quarter, 1876 .	597
First „ '76 .	421	Third „ .	748

METEOROLOGICAL TABLES (general and special), by James Glaisher:

Dec. quarter, 1875	249–50	June quarter, 1876 .	599–600
March „ '76	423–4	Sept. „ .	750–51

MILLAR (W. H.). *Remarks* in discussion (Mouat on Prison Statistics) 329
ditto (Stansfeld on the Contagious Diseases Acts) . . . 564
MINING Statistics of Hungary 737
MORTALITY of England and Wales, annual rate per 1,000 in eleven divisions, in town and country districts, and in special towns:—

All quarters, 1873-75	246–7	All quarters, 1874-76 .	596–7
„ '74-76	420–21	„ .	747–8

MOUAT (Frederic J., M.D.). *On International Prison Statistics* . 311

Necessity for a uniform international nomenclature of crime, and plan of registering legal operations 311
Notice of judicial statistics taken at the Statistical Congresses of 1853 and 1855 at Brussels and Paris, and details of the principal heads under which they were to be arranged 312–13
Resolution on gaol statistics at the fourth congress in London . . . 313
Model of nominal roll of criminals to be sent with prisoners to gaols, adopted at the congress at St. Petersburg in 1872 314–15
Penitentiary Congresses at Cincinnati and London in 1870 and 1872, and headings of the tabular statements of results received by the committee appointed under Dr. Wines and Signor Beltrani-Scalia . . . 316–17
Present state of the question of a proposed formula by international penitentiary statistics, and proposals of various particulars for adoption in them 318–23
—— special necessity for statistics of criminal lunacy . . . 319–20
—— particulars of four categories to be adopted: prisons as buildings, and condition of persons confined before, during, and after imprisonment . 320–23
—— reference to the vital statistics of the Bengal prisons . . . 323
Conclusions as to particulars to be recorded; adoption of five years as the period for their condensation in the form of individual bulletins, with height, weight, colour of eyes and hair, chest measurements, &c. . . 324–5

Discussion on Dr. Mouat's Paper:
Guy (William A.)
Recent improvements in the description of the unit in prisons; the increased use of photography in the detection of criminals; remarks in favour of England improving its own system as a model for other nations . . 326
Du Cane (Colonel)
Great improvements in our prison statistics: the registering of criminals carried to too great an excess and rendered useless (as instanced in letter A, in which only 89 out of 3,000 names occur three times in six years, and are probably the only ones worth registering), 327. Special benefits of photography as regards coiners and burglars, who are limited in number . 328
Elliott (J. H.)
Necessity of prison treatment being given in criminal statistics . . 328
Heywood (James)
Many improvements have been first suggested by clever men at international congresses 328
Millar (W. H.)
Difficulties in statistics arising from recommitments, and from committing for varying periods for the same crime 329
Farr (William)
Several units to be considered in criminal statistics; Dr. Hancock's statement that crime was less prevalent in Ireland than in England qualified by the large extent to which crime in England was committed by Irishmen . 329
Cragie (Captain P. G.)
Anomalies of systems in county and borough gaols 330

PAGE

MOUAT (Frederic. J., M.D.) *Discussion on his Paper—contd.*
  Hammick (J. T.)
    Desirability of one period being fixed for end of year in Government prisons and county gaols 330
  Long (Rev. J.)
    Favourable view of gaols taken in India by the common people . . 330
  Mouat (Frederic J.), reply:
    The influences of international congresses underrated by Dr. Guy; danger of incomplete criminal statistics as recommended by Colonel Du Cane . 330–31

MOUAT (Frederic J., M.D.). *Preliminary Report of the Ninth International Statistical Congress, held at Buda-Pesth, September*, 1876. 628
    Reference to the eighth session at St. Petersburg, M. Quetelet, &c. . . 629
    Successive alterations of procedure made by the organising commissions at the different meetings since 1857 630–31
    Failure of the procedure at Buda-Pesth from excess of official delegates and the setting aside of the permanent committee 631
    Necessity for strictly defining the business of the permanent and organising commissions 632
    List of special subjects for discussion circulated by the organising committee 633
    Numbers present at each of the congresses since 1853; inferior position as to number of delegates taken by Great Britain compared with her foremost place among nations in real greatness 634–5
    Question as to languages to be used, excessive employment of German, growing importance of English 636–7
    Opening discourse of the Archduke Joseph 638–40
    Some details of the preliminary proceedings (the *résumé* and analysis of papers deferred) 641–2
    Exhibition of charts and statistical tables 642
    Notice of hospitalities received 642–3
    Propositions suggested for the better regulation of the procedure of congresses 643–5
    Mr. Samuel Brown's opinions in favour of congresses as the best means of improving methods and scientific character of statistical research, by uniformity of plans 645
    Future progress which their international character will tend to foster . 646

MOUAT (Frederic J.). *Remarks* in discussion (Stansfeld on the Contagious Diseases Acts) 570

NAVIGATION COMPANIES. Dividends and value of shares. . . 495
NEVINS (J. Birkbeck). Letter on the non-reduction of brothels through the Contagious Diseases Acts 556
  Remarks in discussion (Stansfeld on the Contagious Diseases Acts) 570–71
NEWMARCH (William). *Remarks* in discussion (Dun on Banking Institutions) 190–93
  ditto (Baxter on the Rate of Interest) 296–7
NOBLE (B.). *Remarks* in discussion (Dun on Banking Institutions) . 194
NORMAN (George Warde). See *Land Laws.*

OCTROI. See *Duties.*
OFFERTORIES. See *Pew Rents.*

PANICS, effects of, on the rate of interest, and on the currency laws, and proposed remedial measures 287–90
PAPER, the alfa fibre in Algeria for paper making 576
PARIS, on the Municipal Government of (see *Dilke*) . . . 299
  the taxation of (independent of national taxes), 4*l.* per head for man, woman, and child 301
  chief heads of expenditure of 302
  police, poor relief, drainage, &c. 302–5
  its superficial extent about that of Chelsea 305
  statistics of good supply and budget of 1875 306
PATTERSON (R. H.). *Remarks* in discussion (Chubb on Supply of Gas) 372

PAGE

PATTISON (W. P.). *Remarks* in discussion (Dun on Banking Institutions) 194–5
PEEK (Sir Henry). See *Statistics* (condensed).
PEERAGE. *Table of Peerages, Steps in the Peerage and Baronetcies conferred by the several Governments from* 1830 *to* 1874 . . 417
PEW RENTS and offertories, comparison as to financial profitableness . 335–7
PLAYFAIR (Consul General). See *Algeria* (Reports on).
POOR LAWS, only a necessity where much hired labour . . . 654–5
POPULATION of Egypt, increase of 1861-74, &c. 218
  of Hungary 734–5
  of British India. See *Census* of 1871-72.
POST OFFICE, enormous extent of its services. 624–5
PRICES, tables of consols and provisions, pauperism and coal, 1875-76 246, 420, 596, 747
  ditto, ditto, 1855-75 529
PRISONS, on international prison statistics (see *Mouat*) . . . 311
  of Bengal, vital statistics of, reference to 323
PROSTITUTION. See *Contagious Diseases* Acts.
  (clandestine and juvenile), encouraged by the Contagious Diseases Acts 559–60
PURDY (Frederick). See *Domesday Book* of 1873, digest of.
  Remarks in discussion (Dilke on Paris) 307–8
  ditto (Farr on Valuation of Railways) 533
RAILWAYS, prices and traffic:
  Jan.–Dec., 1875 . — | Jan.–June, 1876 . —
  Jan.–March, '76 . — | Jan.–Sept., ,, . —
  variation in value of stocks in 1875 390
  on the valuation of, and of telegraphs, water companies, canals and other commercial concerns (see *Farr*) 464
  valuation of stock, exchange values often above or below true value 475–6
  capital, and rates of dividend, question of State purchase, and mode of valuation, &c. 477–83
  ditto *tables* 516–19
  (London, Chatham, and Dover), excessive cost per mile, capital and revenue, price of stocks, &c. 478–9
RAWSON (Sir Rawson). *Remarks* in discussion (Skeats on Religious Institutions) 343
REGISTRATION of marriages, births, and deaths (serial *tables*):
  Quar. Sept.–Dec., 1875 . 244 | Quar. March–June, 1876 . 594
  ,, Dec.–Mar., '75-76 418 | ,, June–Sept., ,, . 745
  divisional *tables*, 1873-76 . . . . 248, 422, 598, 749
  annual rate per 1,000, 1869-76 . . . . . . 245, 419, 595, 746
  special *table* of twenty-three large towns 247, 421, 597, 748
  ditto, Scotland,
  (serial, average, bastardy, and divisional *tables*):
  Quarter, Dec., 1875 . 251–3 | Quarter, June, 1876 . 601–3
  ,, Mar., '76 . 425–7 | ,, Sept., ,, . 752–4
  summary of Great Britain and Ireland:
  Quar. Sept.–Dec., 1875 . 253 | Quar. March–June, 1876 . 603
  ,, Dec.–Mar., '75-76 . 427 | ,, June–Sept., ,, . 754
  see also *Mortality*.
RELIGIOUS INSTITUTIONS, statistics relating to the support of, in England and Wales (see *Skeats*) 332

PAGE

RELIGIOUS WORSHIP, places of, increase since 1851 332

REVENUE, net produce of, and application, &c., in years and quarters ending:

Dec., 1872-75	266–7	June, 1873-76	610–11
March, '73-76	433–4	Sept., ,,	760–61

ROBERTS (Charles). *The Physical Requirements of Factory Children* 681

Certificates by the factory surgeon, of age and physical capacity for work required by the Act; report of 1876 in favour of the assimilation of the factory and workshops Acts, and the production of certificates of birth (there being no physical qualities sufficiently distinct to indicate age with certainty), and of medical inspection (no age being an indication of constant physical qualities) 681–2

Analysis of Tables III and IV as to the varieties of heights at the same age, and sameness of height at different ages 683

Development of the teeth no test of age; their premature decay common in factory children from premature development and faults in diet . . 684

The statistics intended to show the relations between ages and heights, chest girths and weights, to form minimum standards similar to those for recruits 684

Sources from which the statistics have been derived: Report on Textile Factories, 1873, Dr. Crosse's register of Chelsea Military Asylum, and Mr. Armstrong's register of Greenwich Hospital School . . . 685

Description of the arrangement of the columns in the *tables*, differences in averages and means; the typical or mean child of 8½ years, height 46½ inches, chest 22¼ inches, and weight 55 lbs., &c. . . . 686

Table I. Heights and weights of boys of 14 years, and relation of weight to height 687–9

Tables II to IV. Height, chest girth, and weight of boys and girls between 8 and 14 (with analyses) 690–700

Prevalence of flat foot among factory children 692

Tables V to XIV. Age, height, chest girth, and weight of boys and girls (urban and rural populations) from 8 to 14 years (in sections of two years each) 701–31

Table XV. Various proportions of body in children from 8 to 13 years (from Quetelet) 732

Table XVI. Number of children to each family in factory and non-factory districts 733

SALT, large export of, from the Mersey; import duties in France, Germany, United States, &c. 666

SCHOOL BOARD, ignorance of children over 7 years of age, &c. . . 625–6

SHAW (Captain), report on Fires. See *Fires.*

SHIPPING, notice of. List of "Bureau Veritas."

tonnage of vessels, foreign and colonial trade, United Kingdom:

Jan.–Dec., 1873-75	264	Jan.–June, 1874-76	608
Jan.-March, '74-76	431	Jan.–Sept., ,,	758

SHIPWRECKS. *Lloyd's Statistics of Marine Losses in* 1874 . . . 223

Lives lost, crews saved and drowned, casualties to sailing vessels and steamers, 1872-74, with annual averages, 224-5. *Tables* showing number of wrecks and casualties to sailing vessels and steamers, and results to ship and cargo, with salvage services, crews saved or drowned and lives lost, and percentages thereon compared with the eight previous years . . 226–37

ditto, ditto in 1875, compared with the nine preceding years . 577–91

SILVER, tables of production, 1848-75, and shipments to East, 1866-75 384

question of the future value of, and its partial supersession in India by Government paper 655–6

SILVER. *The Depreciation of Silver.* [Extract from a paper read by Mr. Giffen at the Social Science Congress, Liverpool, on the Causes and Effects of the Depreciation of Silver] . . . 741

Fall from 58*d.* to 52*d.* per oz.; causes: the demonetisation of silver by Germany, increased supply from American mines, diminished absorbing power by India, &c., effects not more than the constant fluctuation going on in the value of gold from changes in the state of credit, and the consequences: a mixture of good and evil; the principal complaints from the civil service of India paid in rupees but having to remit in gold, and the Indian Government, which, having borrowed largely in gold, is a heavy loser by the exchange; other countries losers who use silver but have borrowed in gold; the losses probably trivial and much exaggerated, except among the civil servants of India 741–4

PAGE

SKEATS (Herbert S.). *Statistics Relating to the Support of Religious Institutions in England and Wales* 332

Places of worship enumerated in the religious census of 1851, 14,160 churches and 20,500 denominational places of worship, increased since to 19,000 churches and 28,000 other places of worship 332-3
Support of religious worship; origin of tithes, a payment in Saxon times . 333
Fixed payment of bishoprics and cathedrals; rent-charge to parochial incumbents supplemented by Ecclesiastical Commission and Queen Anne's Bounty, &c., amounting probably to a total income of 4½ millions . . 334
Pew rents and offertories, the latter said to be more profitable financially than the former; amounts of pew rents as fixed by the commissioners . . 355
—— average offertory returns of London and country churches, and special collections, showing a probable aggregate of 4 millions . . . 336-7
Total contributions by Methodists, Congregationalists, Baptists, and Unitarians 337-9
Instances of contributions by individual churches and estimate of 1*l.* per head of attendants, or 200*l.* per congregation, giving annual aggregate of 6 millions 339-40
Revenues of public religious societies making a total of 1¾ millions . . 340
Aggregate sums spent in each diocese in church building and restoration since 1840 (total 25½ millions) 340-41
Comparative amounts given in Scotland and the United States (the latter 10 millions sterling) 341-2
Want of thought for the claims of destitute pastors and the Poor Clergy Relief Society 342

Discussion on Mr. Skeats's Paper:

Spears (Rev. Mr.)
Statistics of the Unitarian body, places of worship, schools, missionary and benevolent societies, their incomes, &c. 343

Rawson (Sir Rawson)
Amounts collected for special purposes in parishes, much greater than that of the offertories 343

Badenoch (Rev. G. R.)
Amount contributed per head in all denominations known from Irish census statistics, but not from English and Scotch 344

Lumley (W. G.)
Difficulty in obtaining a religious census; the offertories devoted to charity as well as religious purposes; surplice fees not being accounted for in the Clergy List, the probable cause of the difference of value of benefices in that and when valued by the auctioneer 344

Glover (John)
Great increase of the voluntary principle both within as well as without the Establishment; the fruits in the promotion of Christianity hardly equal to the amount expended 344-5

McKenzie (J. H.)
Question of amount of pew rents within and without the Church . . 345

Williams (J. Worthy)
Mode of raising ministers' salaries; that of the Wesleyan bodies, payment by members of 8*s.* a year 345

Skeats (H. S.)
Sums given for the bible and tract societies, composed of subscriptions not sales; sources of his figures; pew rents made compulsory by Parliament, since abandoned by many churches; ministers usually received one-fourth of total contributed 345-6

Elliott (Sir G.)
The value of the paper much enhanced if submitted to strict scrutiny by the Society 346

Farr (William)
References to other returns of religious statistics, and the question of religious census in 1851, and that taken in Ireland; importance of pew rents in support of ministers, &c. 346

Doxey (Rev. Mr.)
Proposal that the steps for a religious census taken in 1851 should again be adopted in 1881; information as to the items of revenue of the religious societies easily attainable; the obtaining the sources of revenue of churches and chapels also desirable 347

Bourne (Stephen)
The revenue obtained from consumption of alcohol and tobacco 40 millions, which if doubled showed amount paid by the people for such appetites at 80 millions against 16 millions paid for higher purposes . . . 348

PAGE

Skeats (Herbert S.). *Discussion on his Paper—contd.*
  Chubb (Hammond)
    The want of knowledge of the statistics of the Established Church and actual condition of the clergy the cause of the insufficient amounts raised for additional curates and the poorer clergy 348

Smee (A. H.). *Remarks* in discussion (Chubb on Supply of Gas) . 379
Social Science (National Association for promotion of), address of the president of the Department of "Economy and Trade," October, 1875 (see *Duff*) 198
  ditto, September, 1876 (see *Lefevre*) 661
Societies. See *Statistical.*
Societies (Religious), revenues of 340
Spears (Rev. Mr.). *Remarks* on statistics of the Unitarian body. (Skeats on Religious Institutions) 343
Spirit, beet-root, chiefly used in Paris 301
Stanhope (Earl), notice of his death 622
Stansfeld (Right Hon. James). *On the Validity of the Annual Government Statistics of the Operation of the Contagious Diseases Acts* 540
    Defect of the statistics: a short-sighted want of seeing the hygienic conditions in true perspective and proportion 540
    Summary of tests which should be applied to such statistics . . . 540
    The statistics should throw light on the real problem to be solved (the hygienic value of this legislation), and not on subordinate uncertain problems 541
    The introduction into this country of a State regulation of prostitution for army and navy sure to be extended in time to the whole population . 541–2
    Scientific people apt to exclude moral influences from consideration, and in reducing percentage of specific disease to stimulate vice and injure the health of a people 542
    Table I. Admission of troops for primary venereal sores and gonorrhœa, 1865-72, not under, and under Contagious Diseases Acts . . . 543
    No beneficial effect on gonorrhœa in the army from the Acts (and in the navy the disease doubled) 544
    Dates when the Acts were put in force at different stations, 1866-69 . . 545
    Table I, rearranged in averages of four years (containing error as to number of men under the Acts) 546–7
    —— II. Number in hospital with primary venereal sores (5 per 1,000 as compared with 72 admissions per 1,000) 547
    No light thrown on the reduction of constitutional disease by these *tables* showing reduction of primary sores. 548
    Rates per ten thousand invaliding in the home army and navy for secondary syphilis 549
    Error in the reports of speaking of primary venereal sores as primary syphilis 549–50
    Instances of the unreliable character of the statistics, in their omission of concealed cases; their inclusion of gonorrhœa cases not previously recorded in the navy; the effect of the 1873 warrant in stopping pay during stay in hospital, &c. 550–52
    Table of primary venereal sores, showing in many instances reduction in the ratio of fall since the Acts; sudden variations from other causes, &c. . 552–4
    Reduction of brothels not shown to be either directly or indirectly a consequence of the Acts, but common to the whole country . . . 554–5
    —— letter of Dr. Birkbeck Nevins relative to ditto 556
    —— statement of Captain Harris relative to the reduction of prostitutes from 4,852 to 2,290 since the Acts, objected to from data of metropolitan reformatories, &c, as unreliable and exaggerated 557–8
    The encouragement of clandestine and juvenile prostitution by the Acts shown from the evidence of managers of reformatories . . . 559–60
    The army medical statistics not impartial but grouped to support a policy, and the police returns loose and unreliable 561

  Discussion on Mr. Stansfeld's Paper:
  Balfour (T. G.)
    Strictly impartial and reliable character of the army medical statistics; the *table* in the 1873 report, which is criticised as dramatic, was prepared on a motion of the House of Commons originating from Dr. Nevins; scientific classification avoided; no connection between the size of the sore and secondary symptoms; necessity for large numbers and sufficient periods of time to obviate fluctuations 562–4
  Millar (W. H.)
    Corroboration of the accuracy of the statistics; explanation of the grouping into periods of years and the resulting apparent discrepancies . . 564

PAGE

STANSFELD (Right Hon. J.). *Discussion on his Paper—contd.*
  Drysdale (Charles R.)
    The Acts ineffectual in diminishing gonorrhœa; necessity of distinguishing between soft and hard sores; great decrease of the soft sore in Paris since 1865, but no decline in syphilis; no secondary symptoms from true "soft sores" 565–6
  Lawson (Robert)
    No great amount of concealment of disease among soldiers; great variety in ratio per thousand of cases in different regiments, 566–7. Calculation showing that gonorrhœa has been reduced by the Acts; saving of men's time in hospital also increased by the Acts; other errors in the paper as to secondary syphilis and invaliding 568–9
  Mouat (Frederic J.)
    Mr. Stansfeld's standpoint a strictly scientific one, and the data of Dr. Balfour and Mr. Lawson not sufficient to determine the question on a loathsome disease which has lasted for centuries 570
  Nevins (J. Birkbeck)
    The figures in the navy reports contradictory to statements made of the operation of the Acts; an error in the table of stations "never under the Acts" (1873) of excluding London from the first half and including it in the second 570–71
  Farr (William)
    Criminality of communicating contagious disease, and necessity of removing notorious sources of infection; Inspector-General Lawson's statement statistically conclusive 571
  Guy (W. A.)
    Approval of Mr. Lawson's mode of dealing with fluctuations in the disease . 571
  Stansfeld (James), reply.
    Objection to Mr. Lawson's proposition as not being scientific, and objections to the Government statistics, not for want of good faith, but of scientific construction 571–2

STATISTICAL CONGRESS (ninth) at Buda-Pesth, 1876, preliminary report (see *Mouat*) 628
STATISTICAL CONGRESSES, numbers present at each one since 1853, &c. 634–5
  proposition for the better regulation of their procedure . . 643–5
STATISTICAL JOURNAL.
  classified list, under eight heads, of papers read and published in the *Journal* during the ten years 1865-75 450–55
STATISTICAL SOCIETY.
  report of the Council, June, 1876 445–58
  proceedings of the forty-second anniversary meeting . . . 459–63
  abstract of receipts and payments for 1875 457
  proceedings at ordinary meetings, and titles of papers read, 1875-76 446–8
  notices of deceased Fellows during 1875-76 . . . . 449, 621
  opening address of the President (see *Heywood*) . . . 621
STATISTICS. *Condensed Statistics.* [Memorandum by Mr. Henry Peek, on the abridgement of our annual trade statistics in the Society's *Journal*] 739–41
    Illustrations of the saving of figures by confining the sums in statistical tables to millions, thousands, or hundreds, and the omission of units . 740

  (PENITENTIARY and prison) (see *Mouat*) 311
STIMULANTS, singular instances in India of confinement of certain stimulants to certain races 658
STRIKES, constant, in trades, 1875 381
SUEZ CANAL, its capital and dividends, shares purchased by British Government, value of its shares, &c. 497–503
SUGAR CANE, cultivation of, in Egypt 222
SYPHILIS. See *Contagious Diseases* Acts.

TAYLER (W.) *Remarks* in discussion. (Dun on Banking Institutions) 193

PAGE

Teeth, their development no test of age 684
premature decay of, among factory children 684
Telegraphs, &c., on the valuation of (see *Farr*) 464
Telegraph Companies, valuation of stock of, purchase by the Government, their excessive claims and those of the railways, &c. . 484–7
Temperature of Egypt, average monthly, unhealthy periods, &c. . 219
Trade of United Kingdom, exports and imports, 1873-76 . . 261, 428, 604, 755
see *Exports* and *Imports*.
value of total exports of Foreign and Colonial produce and manufactures, 1871-75 605
Treaties (Commercial) between Great Britain and foreign countries, the condition and prospects of (see *Duff*, address) . . . 198

Underwriters. *Underwriting in the Year* 1805.
Table of results of an underwriter's account, 1805-6, with monthly totals and results, and average percentage for twenty-one years . . . 592–3

Unitarians, statistics of their churches, schools, societies, &c. . . 343
Universities, question of reduction of fellowships 625

Valuation (on the) of railways, telegraphs, water companies, &c., with prospective, deferred, increasing, decreasing or terminating profits (see *Farr*) 464
Value, analysis and discussion of, affected by difference of opinion, time, probabilities, &c. 466–72
Venereal Diseases. See *Contagious Diseases* Acts.
Vessels. See *Shipping*, *Shipwrecks*.
Vigers (Robert). *Remarks* in discussion (Farr on Valuation of Railways) 536–7

Walford (C.). *Remarks* in discussion (Farr on Valuation of Railways) 536
Water Companies of London, &c., on the valuation of (see *Farr*) . 464
tables of stocks and dividends of 520–21
historical notice of successive supplies of London by, valuation of their dividends and shares 487–93
Waterfield (H.). See *Census* of India.
Wells (David), opinions on the injurious effects of the protective system to the industries of the United States 668–9
Wheat, average price of, 1863-75 (see *Prices*) 383
Williams (J. Worthy). *Remarks* on payment of ministers by the Wesleyan body (Skeats on Religious Institutions) . . . 345
Wolowski (M.), obituary notice of 621

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(Founded 1834,)

SOMERSET HOUSE TERRACE, STRAND, LONDON, W.C.
(King's College Entrance.)

Contents.

	PAGE
Council and Officers	2
Objects of the Society	3
Howard Medal of 1877, Subject of Essay for..	5
Calendar for Session 1876–77	6
Programme of the Session 1876-77	7
List of Fellows	8
Do. Honorary Members	37
Index to Rules	41
Rules of the Society	42
Regulations of the Library	47
Donors to the Library, Year 1875-76	47
Cost of Back Nos. of Journal (*if not out of Print*).	51
Form of Bequest	52

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Bankers.—Messrs. Drummond and Co., Charing Cross, S.W., London.

AN
OUTLINE
OF
THE OBJECTS OF THE STATISTICAL SOCIETY.

The *Statistical Society* of London was founded, in pursuance of a recommendation of the British Association for the Advancement of Science, on the 15th of March, 1834, for the purpose of collecting, arranging, and publishing facts calculated to illustrate the position and prospects of Society, and especially facts which can be stated numerically and arranged in tables. The collection of new statistical materials, it was contemplated, would form only one part of the Society's labours; the condensation, arrangement, and publication of those already existing, whether unpublished, or published only in an expensive or diffuse form, or in foreign languages, being a work of almost equal usefulness.

It was also a prominent object of the Society to form a complete Statistical Library as rapidly as its funds would permit.

Such were the original aims and objects of the Society; and now that it is in the *forty-second* year of a prosperous existence, its Fellows have every reason to revert to them with satisfaction; for it is seldom that the first designs of a public association for the advancement of Science are carried out with a success so complete as has been achieved in this instance.

The Society now possesses a valuable library and a reading room (see p. 47); its ordinary meetings, held monthly from November to June, which are well attended, have cultivated among its Fellows an active spirit of investigation, and brought out the valuable results of much individual labour; its Quarterly *Journal*, in which the papers read before the Fellows are printed *in extenso*, with the discussions thereon, forms of itself a valuable library of reference.

The Society has also originated and statistically conducted several inquiries on subjects of economic or social interest, the latest effort in that direction being the institution of the "Howard Medal" Prize Essay, which has elicited valuable papers from various contributors.

In order that the Society may extend its sphere of useful activity, and accomplish the various ends indicated, an increase in its numbers and revenue is most desirable.

Should that increase be realised, the Society might become a Publishing Society for Standard Works on Statistical Science out of print or scarce; and could gather together a complete collection of the best statistical authorities in English, French, German and Italian. A well-arranged library of reference of the kind projected does not at present exist in England.

The Society consists of Fellows and of Honorary Members. The principal States of Europe and America, British India, and the Crown Colonies are represented by the "Honorary Members." The organisation of the Society has from its inception been purposely cosmopolitan, and it carefully cultivates a connection with the several local societies of the Empire, and a correspondence with those of Foreign Countries.

Fellows elected in or after the month of June are exempt from the payment of the annual subscription for the current year. The *Journal* of the Society, published quarterly, is distributed gratuitously to the Fellows.

Proposal Papers and any further information will be forwarded, on application, by the Assistant Secretary.

PRIVILEGES OF FELLOWSHIP.

Fellows are entitled to—

Attend and Vote at Ordinary and Anniversary Meetings.
Introduce Visitors to the Ordinary Meetings.
Receive gratuitously a copy of each Part of the Journal published.
Use the Library and Reading-Room of the Society.
Borrow Books or Works from the Library.
Propose eligible Candidates for Fellowship.

THE HOWARD MEDAL.

In the year 1873, the centenary of the appointment of John Howard as High Sheriff of the county of Bedford, the Council of the Statistical Society gave effect to the suggestions of Dr. Guy, F.R.S., then President, by founding a Medal (Bronze) under the above title, in recognition of Howard's claim to be considered at least as much a Statist as a Philanthropist. This Medal is to be given every year to the author of the best essay on some subject in social statistics, giving a preference to those in which Howard himself was most interested.

The following is the title of the essay to which the Medal will be awarded in November, 1877. The essays to be sent in on or before June 30, 1877.

> "On the Condition and Management—past and present—of the Workhouses and similar Pauper Institutions in England and Wales, and their effect on the Health, Intelligence, and Morals of the Inmates."

The President, James Heywood, Esq., F.R.S., has added £20 for the successful Competitor.

Extract from Rules:—

"The Council shall not award the Prize, except to the author of an Essay, in their opinion, of a sufficient Standard of Merit; and no Essay shall be deemed to be of sufficient merit that does not set forth the facts with which it deals,—in part, at least, in the language of figures and tables; with distinct references to such authorities as may be quoted or referred to.

"Competition for this Medal shall not be limited to the Fellows of the Statistical Society, but shall be open to any competitor, provided the Essay be written in the English language.

"Essay not to exceed in length 150 pages of the *Journal of the Statistical Society* (8vo.)"

Further particulars or explanations may be obtained from the Assistant Secretary, at the rooms of the Statistical Society, Somerset House Terrace (King's College Entrance), Strand, W.C., London.

Names of the Successful Candidates for the Howard Medal:—

1875.—Edward Smith, Esq., F.S.S.
1876.—J. C. Steele, Esq., M.D.

CALENDAR FOR SESSION 1876-77.

1876	SUN.	MON.	TUES.	WED.	THURS	FRI.	SATUR.
NOV.	…	…	…	1	2	3	4
	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	**21**	22	23	24	25
	26	27	28	29	30	…	…
DEC.	…	…	…	…	…	1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	**19**	20	21	22	23
	24	25	26	27	28	29	30
	31	…	…	…	…	…	…
1877 JAN.	…	1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	**16**	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	31	…	…	…
FEB.	…	…	…	…	1	2	3
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	**20**	21	22	23	24
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MAR.	…	…	…	…	1	2	3
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	11	12	13	14	15	16	17
	18	19	**20**	21	22	23	24
	25	26	27	28	29	30	31
APR.	1	2	3	4	5	6	7
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	15	16	**17**	18	19	20	21
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	29	30	…	…	…	…	…

1877	SUN.	MON.	TUES.	WED.	THURS.	FRI.	SATUR.
MAY	…	…	1	2	3	4	5
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	13	14	**15**	16	17	18	19
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	27	28	29	30	31	…	…
JUNE	…	…	…	…	…	1	2
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	10	11	12	13	14	15	16
	17	18	**19**	20	21	22	23
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JULY	1	2	3	4	5	6	7
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	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31	…	…	…	…
AUG.	…	…	…	1	2	3	4
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	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	31	…
SEP.	…	…	…	…	…	…	1
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	30	…	…	…	…	…	…
OCT.	…	1	2	3	4	5	6
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	28	29	30	31	…	…	…

Ordinary Meetings will be held on the Tuesday Evenings marked in Black Figures.

The Chair will be taken at 7·45 *o'clock p.m., precisely.*

Visitors may attend the Ordinary Meetings on the introduction of a Fellow.

SESSION 1876-77.

ORDINARY MEETINGS,

THIRD TUESDAY IN THE MONTHS OF NOVEMBER—JUNE.

Tuesday, November 21.	Tuesday, March 20.
" December 19.	" April 17.
" January 16.	" May 15.
" February 20.	" June 19.

The Council have reason to expect that in the course of the Session the following Papers will, among others, be communicated to the Society:—

The PRESIDENT'S Opening Address.

Dr. F. J. MOUAT, F.R.C.S.—"A Report on the Ninth International Statistical Congress held at Budapest, from 1st to 7th September, 1876."

Professor LEONE LEVI, LL.D.—"The Statistical Results of the Treaties of Commerce, and their relation to the Balance of Trade."

STEPHEN BOURNE, Esq.—"The Growing Preponderance of Imports over Exports in the Trade of this Country."

F. G. P. NEISON, Esq.—"Some Statistics of the Affiliated Orders of Friendly Societies" (Odd Fellows and Foresters).

FRANCIS R. CONDER, Esq.—"Does the Mineral Traffic of Railways Pay?"

GEORGE D. HOOPER, Esq.—"The Supplementary Educational Institutions of the Metropolis."

FREDERICK MARTIN, Esq.—"Births, Marriages, and Deaths, and the Comparative Growth of Population, in the principal States of Europe."

HENRY RICHMOND DROOP, Esq.—"Methods of Electing Representatives."

Captain PATRICK GEORGE CRAIGIE.—"The Cost of English Local Government."

W. BAYNES RANKEN, Esq.—"English Convicts before and after their Discharge, considered Statistically."

CORNELIUS WALFORD, Esq., F.I.A.—"Statistics of Fires and Fire Insurance."

E. W. BRABROOK, Esq.—"International Statistics of Savings Banks."

THE GENERAL ANNIVERSARY MEETING

WILL BE HELD ON

TUESDAY, the 26th of June, 1877, at Three p.m.

LIST OF FELLOWS.

*Those marked thus * have compounded for their Annual Subscriptions.*

The names of Members of Council are printed in Small Capitals.

Year of Election.	
1876	Abell, George Edmund, *Worcester City and County Bank, Worcester.*
1876	Abrahams, Israel, F.R.G.S., 56, *Russell-square, W.C.*
1870	Absolon, Eugene, 24, *Royal Avenue, King's-road, Chelsea, S.W.*
1862	Acland, Henry Wentworth, M.D., F.R.S., *Oxford.*
1869	Acland, Sir Thomas Dyke, Bart., M.P., F.R.S., *Sprydoncote, Exeter; and Athenæum Club, S.W.*
1861	Adams, Arthur Robarts, D.C.L., *St. John's College, Oxford.*
1876	Adams, Josiah Oake, F.R.C.S., *Brooke House, Clapton, E.*
1867	Addison, John, 6, *Delahay-street, Great George-street, S.W.*
1873	*Airlie, The Right Hon. the Earl of, K.T., *Airlie Lodge, Camden Hill, W.*
1876	Aitchison, William John, 2, *Princes-street, E.C.*
1841	Aldam, William, F.R.S., *Frickley Hall, Doncaster.*
1872	Aldridge, James, 3, *Queen's-terrace, Southampton.*
1876	Aldwinckle, Thomas Williams, 7, *East India-avenue, Leadenhall-street, E.C.*
1847	Alexander, George William, 30, *Lombard-street, E.C.*
1872	Alexander, Robert Henry, 30, *Lombard-street, E.C.*
1876	Allen, John T. R., *North Bailey, Durham.*
1875	Allen, Joseph, 37, *Old Jewry, E.C.*

Year of Election.	
1871	Allport, James Joseph, *Littleover, near Derby.*
1871	Anderson, Sir James, F.R.G.S., F.G.S., 66, *Old Broad-street, E.C.*
1871	Angus, R. B., *Montreal, Canada.*
1834	*Ansell, Charles, F.R.S., 92, *Cheapside, E.C.*
1874	Appleton, Charles Edward, C.B., D.C.L., *Netley Cottage, Hampstead, N.W.*
1872	*Archibald, W. F. A., M.A., 3, *Amersham-road, Putney, S.W.*
1874	Arlidge, John Thomas, M.D., F.R.C.P., *Newcastle, Staffordshire.*
1873	Artingstall, George, F.R.G.S., *Latchford House, Warrington.*
1876	Ashby, Alfred, M.B., F.R.C.S., *Vine House, Grantham, Linlconshire.*
1874	Ashwell, The Rev. Canon, M.A., *Chichester.*
1854	Ashworth, Henry, *The Oaks, Bolton, Lancashire.*
1871	Atkinson, George W., 1, *Regent-street, Barnsley.*
1870	Avery, Thomas, *Church-road, Edgbaston, Birmingham.*
1871	Axon, William E. A., 4, *Victoria-terrace, Rusholme, Manchester.*

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Year of Election.	
1872	*Babbage, Major-General Henry P., *Dainton House, Bromley, Kent.*
1872	*Backhouse, Edmund, M.P., *Middleton Lodge, Richmond, York.; Reform Club, S.W.*
1875	Baddeley, Samuel, *Freeland's-road, Bromley, Kent.*
1873	Badenoch, The Rev. Dr. G. R., LL.D., 3, *Pagoda Villas, Lee, S.E.*
1864	Bagehot, Walter, M.A., 52, *Rutland Gate, S.W.*
1855	Bailey, Arthur Hutcheson, F.I.A., 7, *Royal Exchange, E.C.*
1873	Bain, William P., M.D., 15, *Brunswick-street, Blackwall, E.*
1858	Baines, Edward, *St. Ann's-hill, Burley, Leeds.*
1848	Balfour, General Sir George, M.P., D.L., K.C.B., 6, *Cleveland-gardens, Bayswater, W.*

Year of Election.	
1873	Balfour, Jabez Spencer, 20, *Budge-row, Cannon-street, E.C.*
1865	Balfour, Thomas Graham, M.D., F.R.S., 6, *Whitehall-yard, S.W.*
1849	Bampton, James, 13, *St. James's-square, S.W.*
1875	Barclay, Thomas, Ph.D., 22, *Rue Vivienne, Paris.*
1873	Barham, Francis F., *Bank of England, Manchester.*
1876	BAXTER, ROBERT, 5 *and* 6, *Victoria-street, Westminster, S.W.*
1872	*Bass, Michael Arthur, M.P., 101, *Eaton-square, S.W.; Rangemore, Burton-on-Trent.*
1836	Bass, Michael Thomas, M.P., 101, *Eaton-square, S.W.; Rangemore, Burton-on-Trent.*
1873	Bate, George, 183, *Essex-road, Islington, N.*
1876	Bartleet, Edwin, J.P., F.R.C.S., *Chipping Campden, Gloucestershire.*
1873	*Baynes, Alfred Henry, F.R.G.S., 19, *Castle-street, Holborn, E.C.*
1871	*Baynes, William Wilberforce, F.I.A., 32, *Moorgate-street, E.C.*
1875	*Beardsall, Francis E. M., 64, *Cross-street, Manchester.*
1875	*Beaufort, William Morris, *Athenæum Club, Pall Mall, S.W.*
1873	Beaumont, Wentworth Blackett, M.P., F.R.G.S., 144, *Piccadilly, W.*
1863	Beddoe, John, M.D., 2, *Lansdowne-place, Clifton.*
1872	*Bedford, His Grace, the Duke of, *Woburn Abbey, Oakley, Bedford.*
1871	*Beer, Julius Paul, 23, *Park-crescent, W.*
1834	Belper, The Right Honourable Lord, P.C., F.R.S., 75, *Eaton-square, S.W.*
1856	*Beresford-Hope, Alexander James Beresford, M.P., D.C.L. 1, *Connaught-place, W.*
1875	Bevan, Thomas, J.P., *Stone Park, near Dartford, Kent.*
1869	*Beverley, Henry, 27, *Theatre-road, Calcutta.*
1869	Beyts, Hon. Henry Nicholas Duverger, *Port Louis, Mauritius.*
1866	Bikélas, Démétrius,
1836	Blake, William John, F.R.S., F.G.S., 25, *Portland-place, W.*

Year of Election.	
1864	Blakely, Edward T., *Statistical Department, Board of Trade, S.W.*
1874	Blyth, James Nisbet, 28, *Highbury-place, N.*
1873	Bogie, James, 5, *Spence-street, Newington, Edinburgh.*
1860	Bohn, Henry George, F.R.A.S., F.L.S., 18, *Henrietta-street, Covent Garden, W.C.; Twickenham.*
1875	Borthwick, The Right Hon. Lord *Saltrey House, St. Andrew's, N.B.;* 35, *Hertford-street, W.*
1871	Bourne, Stephen, *Statistical Office, H.M. Custom House, E.C.*
1860	Bovill, William John, Q.C., 22, *James-street, Buckingham-gate, S.W.*
1876	Bowen, Horace George, *Bank of England, Burlington-gardens, W.*
1874	Brabrook, Edward William, F.S.A., M.R.S.L., 28, *Abingdon-street, S.W.*
1875	Braby, James, J.P., *Maybanks, Rudgwick, Sussex.*
1874	Bramley-Moore, John, D.L., *Gerrard's-cross, Bucks.*
1855	Brand, The Right Hon. Henry Bouverie William, M.P., *Speaker's Court, House of Commons, S.W.*
1873	Brassey, Thomas, M.P., 4, *Great George-street, S.W.; and* 24, *Park-lane, W.*
1867	Bremner, John A., *Hilton House, Prestwich, Manchester.*
1874	Brewer, John, 6, *Victoria-street, Westminster, S.W.*
1873	Briggs, Thomas, *Homestead, Richmond, Surrey.*
1872	Brind, Frederick William, *Bickley, Kent.*
1876	Brodhurst, Bernard Edward, F.R.C.S., 20, *Grosvenor-street, Grosvenor-square, W.*
1873	Brogden, Alexander, M.P., 51, *Prince's Gate, S.W.*
1874	Broom, Andrew, 10, *Chancellor-road, West Dulwich, S.E.*
1872	Brown, James Bryce, F.R.G.S., 90, *Cannon-street, E.C.; and Bromley, Kent.*
1866	Brown, Thomas, jun., 65, *West Regent-street, Glasgow.*
1873	Browne, Edward W., *Sussex House, Knock, Belfast.*
1875	Browne, Thomas G. C., *Mossbank Villa, North Finchley, N.*
1873	Browning, Arthur Giraud, 3, *Victoria-street, Westminster, S.W.*

Year of Election.	
1876	Bruton, Leonard, 31, *Clare-street, Bristol.*
1865	Bunce, John Thackray, *"Daily Post" Office, Birmingham.*
1873	*Burdett-Coutts, The Right Hon. the Baroness, 1, *Stratton-street, Piccadilly, W.; and Holly Lodge, Highgate, N.*
1863	Burnett, Alexander Smith, F.I.A., *Bridge Town, Barbados, West Indies.*
1872	Burns, The Rev. Dawson, M.A., 52, *Parliament-street, S.W.*
1874	Burr, William, 42, *Poultry, E.C.*
1868	Burton, Samuel Warren,
1857	Caird, James, C.B., F.R.S., 3, *St. James's-square, S.W.; and Cassencarie, Kirkcudbrightshire.*
1874	Campbell, Sir George, K.C.S.I., M.P., D.C.L., 13, *Cornwall-gardens, South Kensington, S.W.*
1862	Cape, George A., 8, *Old Jewry, E.C.*
1872	*Carillon, J. Wilson, F.S.A., F.R.G.S., A.I.A., *Wormhill, Buxton.*
1871	Carnac, Harry Rivett- *Calcutta, India.*
1876	Carphin, James Rhind, C.A., 31, *George-street, Edinburgh.*
1875	Carter, Frederick Hayne, 5, *St. Andrew-square, Edinburgh.*
1862	Carter, Henry Bonham, 11, *Lombard-street, E.C.*
1848	Carter, John Bonham, 25, *Ashley-place, Victoria-street, S.W.*
1874	Carter, Wm. Allan, C.E., F.G.S.E., 5, *St. Andrew's-square, Edinburgh.*
1858	Chadwick, David, M.P., *The Poplars, Herne Hill, Dulwich, S.E.*
1834	Chadwick, Edwin, C.B., *Park Cottage, East Sheen, Mortlake, S.W.*
1869	Chadwick, John Oldfield, F.R.G.S., 2, *Moorgate-street, E.C.*

Year of Election.	
1875	Challen, George Caleb, 37, *Old Jewry, E.C.*
1873	Charlesworth, Frederic, *Widmore, Bromley, Kent.*
1863	Charlton, W. H., *Hesleyside, near Hexham, Northumberland.*
1873	Charrington, Thomas, *Mayfield, Chislehurst, Kent.*
1851	*Cheshire, Edward, 3. *Vanbrugh Park, Blackheath, S.E.*
1874	Chinery, David, F.R.G.S., F.S.A., *Bosworth Lodge, Willesden, Middlesex, N.W.*
1853	Chisholm, David, F.I.A., 64, *Princes-street, Edinburgh.*
1862	Christie, Richard Copley, M.A., 2, *St. James's-square, Manchester.*
1869	**Chubb, Hammond**, B.A., (*Secretary*), *Bickley, Kent.*
1856	Clark, Sir John Forbes, Bart., *Tilliepronie, Tarland, Aberdeenshire.*
1849	Clark, Gordon Wyatt, *Mickleham Hall, near Dorking, Surrey.*
1876	Clarke, Henry Harcourt Hyde, 32, *St. George's-square, S.W.*
1856	***Clarke, Hyde**, D.C.L., 32, *St. George's-square, S.W.*
1871	Clarke, Ebenezer, jun., 52, *Cannon-street, E.C.*
1869	**Cleghorn, John**, 3, *Spring-gardens, S.W.*
1850	*Cleveland, His Grace the Duke of, K.G., 17, *St. James's-square, S.W.*
1853	Clirehugh, William Palin, F.I.A., 158, *Leadenhall-street, E.C.*
1873	Cockle, Captain George, F.R.G.S., 9, *Bolton-gardens, South Kensington, S.W.*
1838	Colebrooke, Sir Thomas Edward, Bart., M.P., 37, *South-street, W.*
1859	Coles, John, F.I.A., 39, *Throgmorton-street, E.C.*
1874	Collins, Eugene, M.P., 38, *Porchester-terrace, Hyde Park, W.*
1874	Collinson, Henry, F.L.S., F.R.G.S., 7, *Devonshire-place, Portland-place, W.*
1874	Collinson, John, F.R.G.S., 37, *Porchester-terrace, Hyde Park, W.*
1867	Colman, Jeremiah James, M.P., *Carrow House, Norwich.*
1874	*Cookson, Faithful, Esq., F.R.G.S., *Teddington Hall, Middlesex.*

Year of Election.

1843 *Copperthwaite, Charles William,
New Malton, Yorkshire.

1874 Corbett, John, M.P.,
6a, *Waterloo-place, Pall Mall, London, S.W.*

1873 Cork, Nathaniel, F.R.G.S.,
39, *Lombard-street, E.C.*

1875 Cossham, Handel, F.G.S.,
Weston Park, Bath; & Holly Lodge, St. George's, Bristol.

1866 Cotton, Francis Lovett,
Baltic Chambers, 108, *Bishopsgate-street Within, E.C.*

1874 Couch, The Rev. Enos, M.A., F.R.G.S.,
19, *Old Gravel-lane, E.*

1862 Courtney, Leonard Henry, M.A., M.P.,
Chapel Staircase, Lincoln's-inn, W.C.

1873 Cowper, The Hon. Henry Frederick, M.P.,
4, *St. James's-square, S.W.*

1857 *Cowper-Temple, The Right Hon. William Francis, M.P.,
15, *Great Stanhope-street, W.*

1874 Craigie, Captain Patrick George,
Hartley House, Lower Heath, Hampstead, N.W.

1870 Craik, George Lillie,
29, *Bedford-street, Strand, W.C.*

1872 Crellin, Philip,
33, *Chancery-lane, W.C.*

1876 Crosse, John Burton St. Croix, F.R.C.S.,
Royal Military Asylum, Chelsea, S.W.

1875 Crowe, William Russell,
Stanley House, Carshalton, Surrey.

1875 Cunningham, David, C.E.,
Work's Office, Harbour-chambers, Dundee.

1848 Cutcliffe, George, F.I.A.,
13, *St. James's-square, S.W.*

1873 Czarnikow, Cæsar,
Mitcham, Surrey.

1869 Dalyell, The Hon. Robert Anstruther,
Calcutta.

1873 Danvers, Juland,
India Office, S.W.

1869 Davies, James Mair,
65, *West Regent-street, Glasgow.*

1874 Davies, William Henry,
51, *Tregunter-road, S.W.*

1874 Davis, Sir John Francis, Bart., K.C.B., D.C.L.,
Hollywood, Westbury, Bristol.

1855 *Dawbarn, William,
Elmswood Hall, Aigburth, Liverpool.

Year of Election.
1873 Dawson, James Thomas,
2, *Royal Exchange-buildings, E.C.*
1876 Day, William Ansell,
Lyndhurst House, Hendon, N.W.
1873 Delahunty, James,
2, *Savile-row, W.*
1873 Dent, Clinton Thomas,
12, *Hyde-park Gardens, W.*
1873 Dent, Edward,
12, *Hyde-park Gardens, W.*
1855 *DERBY, THE RIGHT HONOURABLE THE EARL OF, P.C., F.R.S.,
(*Honorary Vice-President*),
23, *St. James's-square; and Knowsley, Prescot, Lancashire.*
1866 *Dilke, Sir Charles Wentworth, Bart., M.P., LL.M.,
76, *Sloane-street, S.W.*
1873 Divett, Edward Ross,
Reform Club, Pall Mall, S.W.
1873 Dixon, George,
46, *Queen's-gate, S.W.*
1874 Dow, James Alexander,
5, *Lothbury, E.C.*
1876 Dowden, Major Thomas Freeman, R.E.,
71, *Old Broad Street, E.C.* (Crawford, Colvin & Co.)
1875 Doxsey, Rev. Isaac,
The Grove, Camberwell, S.E.
1875 Drimmie, David,
41, *Lower Sackville-street, Dublin.*
1872 Droop, Henry Richmond,
1*a*, *New-square, Lincoln's-inn, W.C.*
1875 Dun, John,
Parr's Banking Company, Limited, Warrington.
1870 Duncan, James,

1871 Duprat, Le Vicomte, (*Consul-Général de Portugal*),
46, *Palace-gardens-terrace, Kensington, W.*
1875 Dyer, Captain Swinnerton Halliday, J.P.,
Westcroft Lodge, Bagshot, Surrey.

1836 Edmonds, Thomas Rowe, B.A.,
72, *Portsdown-road, Maida-vale, W.*
1869 Edmonds, William,
Airedale Villa, Elm-grove, Southsea.
1875 Edwards, Samuel,
4, *Eliot Park, Lewisham, S.E.*
1872 Elliot, Sir George, Bart., M.P.,
Park-street, Park-lane, W.

Year of Election.	
1842	Elliott, John Hawkins, 4, *Martin's-lane, City, E.C.*
1874	Elliot, Robert, M.D., F.R.C.P., 35, *Lowther-street, Carlisle.*
1873	Ellissen, Adolf, 28, *Maida-hill West, W.*
1873	Elsey, John Green, J.P., *Morant House, Addison-road, Kensington, W.*
1873	Emanuel, Lewis, 36, *Finsbury-circus, E.C.*
1876	Evans, George H., M.D., 29, *Devonshire-street, Portland-place, W.*
1862	Evens, John Henry, 9, *Finsbury-place, E.C.*
1875	Everett, H. Sidney, M.A., *Bromley House, Bromley, Kent.*
1834	Eversley, The Right Honourable Viscount, D.C.L., LL.D 114, *Eaton-square, S.W.; and Winchfield, Hants.*
1867	Fairley, William, Ph D., *Bloxwich, near Walsall, Staffordshire.*
1875	Faraday, Frederick J., *Daisy-avenue, Albert-road, Longsight, Manchester.*
1874	Farmer, James, 6, *Porchester-gate, Hyde Park, W.*
1839	FARR, WILLIAM, M.D., D.C.L., F.R.S., (*Honorary Vice-President*), *General Register Office, Somerset House, Strand, W.C.; and Southlands, Bickley, Kent.*
1868	Farrell, John Douglas, *Bank of England, West Branch, Burlington-gardens, W.*
1876	Fearnside, Henry, M.B., F.R.C.P., 9, *Ribblesdale-place, Preston, Lancaster.*
1864	Fellows, Frank P., 8, *The Green, Hampstead, N.W.*
1874	Ferguson, A.M., *"Ceylon Observer" Office, Colombo, Ceylon.*
1874	Ferguson, J., *"Ceylon Observer" Office, Colombo, Ceylon.*
1834	Finch, John, *Heathside, Tunbridge Wells.*
1873	Fisher, Henry, 38, *New Broad-street, E.C.*
1875	FitzGeorge, Owen, 21, *Cornhill, E.C.*
1865	FitzWilliam, William Shelford, F.R.G.S., 12, *Gunter-grove, Chelsea, S.W.*

Year of Election.

1875 Fordham, Edward King, J.P.,
Ashwell Bury, near Baldock, Herts.

1841 Fortescue, The Right Honourable Earl, (*Vice-President*),
9, *Hertford-st., W., and Castle Hill, S. Molton, Devon.*

1876 Forsyth, Sir Thomas Douglas, C.B., K.C.S.I.,
44, *Onslow-square, South Kensington, S.W.*

1871 Forwood, William Bower,
Ramlet, Blundellsands, Liverpool.

1868 Fowler, William,
30, *Lombard-street, E.C.*

1873 Franklin, Jacob Abraham,
London Institution, Finsbury-circus, E.C.

1844 *Freeland, Humphrey William, J.P.,
Athenæum Club, S.W.; and Chichester.

1872 Freeman, Francis,
28, *Conduit-street, London, W.*

1876 Freeman, Joseph,
6, *Rye-terrace, Peckham Rye, S.E.*

1876 Freeman, T. Kyffin,
Pinner Wood, Watford, Herts.

1875 Gair, Alexander,
34, *Cannon-street, E.C.*

1852 Galsworthy, Edwin Henry, J.P., F.I.A.,
18, *Upper Wimpole-street, W.*

1873 *Galton, Capt. Douglas, R.E., C.B., F.R.S.,
12, *Chester-street, Grosvenor-place, S.W.*

1860 Galton, Francis, F.R.S., F.R.G.S., (*Vice-President*),
42, *Rutland-gate, S.W.*

1872 Gastrell, Colonel J. E., (care of H. J. Gastrell),
36, *Lincoln's-inn-fields, W.C.*

1874 Gatliff, Charles,
8, *Finsbury-circus, London, E.C.*

1872 Gibb, Thomas Eccleston,
16, *Lady Margaret-road, N.W.*

1874 Gibbs, Alban George Henry,
St. Dunstan's, Regent's-park, N.W.

1871 Gibbs, George Sleight,
Darlington.

1867 Giffen, Robert, (*Secretary*),
44, *Pembroke-road, Kensington, W.*

1860 Glover, John,
22, *Great St. Helen's, Bishopsgate-street, E.C.*

1869 Goldney, Gabriel, M.P.,
40, *Hill-street, Berkeley-square, W.; and Beechfield House, Chippenham.*

Year of Election.	
1850	Goldsmid, Sir Francis Henry, Bart., M.P., Q.C., *St. John's Lodge, Regent's-park, N.W.*
1868	Göschen, The Right Hon. George Joachim, M.P., 67, *Portland-place, W.*
1855	*Gosset, John Jackson, *Thames Ditton, Surrey.*
1873	Gouly, Edward James, *Bullion Office, Bank of England, E.C.*
1853	Gover, William Sutton, F.I.A., 4, *Queen-street-place, Southwark Bridge, E.C.*
1876	Grahame, James, C. A., 12, *St. Vincent-place, Glasgow.*
1875	Granville, Joseph Mortimer, M.D., M.R.C.S., F.G.S., &c., *Scientific Club*, 7, *Savile-row, W.*
1847	Gray, Thomas, 34, *Fenchurch-street, E.C.*
1868	Griffith, Edward Clifton, 48, *Pall Mall, S.W.*
1841	Griffith, John, 6, *Hanover-terrace, Regent's-park, N.W.*
1841	Griffith, Richard Clewin, F.R.G.S., 20, *Gower-street, W.C.*
1872	Griffiths, John George, 4, *Lothbury, E.C.*
1875	Gunn, Arthur, *Metropolitan Board of Works, Spring-gardens, S.W.*
1860	Gurney, Daniel, *North Runcton, near King's Lynn, Norfolk.*
1839	GUY, WILLIAM AUGUSTUS, M.B., F.R.C.P., V.P.R.S., (*Honorary Vice-President*), 12, *Gordon-street, Gordon-square, W.C.*
1867	Haddon, Frederick William, "*Melbourne Argus*" *Office, Melbourne, Victoria.*
1873	Haggard, Frederick T., *Eltham Court-road, Eltham, Kent.*
1872	Haliburton, R. G., 15, *Buckingham-street, Strand, W.C.*
1876	Hall, Edward Algernon, 20, *Clarges-street, W.*
1876	Hall, Edward Hepple, 36, *Elgin-road, St. Peter's-park, W.*
1869	Hall, James Macalester, *Killean House, Tayinloan, Argyleshire.*
1860	HAMILTON, ARCHIBALD, J.P., *South Barrow, Bromley, Kent.*

Year of Election.	
1873	Hamilton, Lord George Francis, M.P., 17, *Montagu-street, Portman-square, W.*
1855	HAMMICK, JAMES THOMAS, *General Register Office, Somerset House, W.C.*
1841	HAMPTON, THE RIGHT HON. LORD, G.C.B., D.C.L., (*Honorary Vice-President*), 9, *Eaton-square, S.W.; and Westwood-park, Droitwich.*
1873	Hanbury, Robert William, M.P., *Ilam Hall, Ashbourne, Derbyshire.*
1869	Hancock, William, 33, *Cornhill, E.C.*
1875	Hankey, Ernest Alers, *Elmhyrst, Bickley Park, Kent.*
1837	*Hankey, John Alexander, J.P., *Balcombe-place, Cuckfield, Sussex.*
1861	Hannyngton, Major-General John Caulfield, F.I.A., *India Office, Westminster, S.W.*
1876	Hansard, Luke, 68, *Lombard-street, E.C.*
1871	Harcourt, Sir William Vernon, Q.C., M.P., 14, *Stratford-place, W.*
1875	Hardwicke, William, M.D., *Holder's Hill Hall, Holder's Hill, Hendon, N.W.*
1868	Harris, David, *Caroline Park, Granton, Edinburgh.*
1868	Harrison, John, jun., 85, *Northgate, Darlington.*
1834	HARROWBY, THE RIGHT HON. THE EARL OF, K.G., D.C.L., F.R.S., (*Honorary Vice-President*), 39, *Grosvenor-square, W.*
1870	Hartley, Fountain John, *Laurel House, Graham-road, Dalston, E.*
1873	Haughton, Benjamin, C.E., 1, *Westminster-chambers, Victoria-street, S.W.*
1875	Haughton, Colonel J. Colpoys, C.S.I., *West Farleigh, Maidstone, Kent.*
1876	Hawkins, Alfred Templeton, 20, *Great George-street, Westminster, S.W.*
1834	Hawkins, Francis Bisset, M.D., F.R.S., 146, *Harley-street, W.*
1834	Hawkins, John Heywood, M.A., F.R.S., *Bignor Park, Pulborough.*
1873	Hay, James Lamb Napier, *Manager, Queen Insurance Company, Calcutta.*
1871	Head, Jeremiah, *Coatham, Redcar, Yorkshire.*
1870	Hefford, G. V., *Rugby.*
1860	Helder, Stewart, F.I.A., 2, *Broad Sanctuary, S.W.*

Year of Election.	
1865	Hendriks, Augustus, F.I.A., 7, *Cornhill, E.C.*
1855	*HENDRIKS, FREDERICK, 1, *King William-street, E.C.*
1858	Herapath, Spencer, F.G.S., 18, *Upper Phillimore-gardens, W.*
1874	Hertz, James, 124, *Cannon-street, E.C.*
1834	*HEYWOOD, JAMES, M.A., F.R.S., F.G.S., (*President and Trustee*), 26, *Palace-gardens, Kensington, W.; Athenæum Club.*
1869	Hickson, Joseph, *Montreal, Canada.*
1875	Higham, Charles David, 3, *Princes-street, Bank, E.C.*
1834	Hill, Sir Rowland, K.C.B., D.C.L., F.R.S., *Hampstead, N.W.*
1876	Hilton, John, F.R.S., F.R.C.S., &c., 10, *New Broad-street, E.C.*
1873	Hime, Capt. H. W. L., R.A., *Colchester, Essex.*
1859	Hincks, His Excellency, Sir Francis, *Montreal, Canada.*
1870	*Hoare, Henry, 9, *St. James's-square, S.W.*
1834	*Hodge, William Barwick, F.I.A., 5, *Whitehall, S.W.*
1867	Hodgson, Professor W. B., LL.D., *Bonaly Tower, Colinton, N.B.*
1873	Hogg, Colonel Sir James Macnaughten, Bart., M.P., 26, *Grosvenor-gardens, S.W.*
1874	Hood, Charles, F.R.S., F.R.A.S., *Grangewood, Upper Norwood, S.E.*
1871	Hooper, Angus Cameron, *Montreal, Canada.*
1874	Hooper, George D., *Pembroke Villa, Oxford-road, Chiswick.*
1855	HOUGHTON, THE RIGHT HONOURABLE LORD, D.C.L., F.R.S., (*Honorary Vice-President*), *Fryston Hall, Ferrybridge, Yorkshire.*
1871	Hoyer, Henry, care of W. A. Hoyer, 31, *Priory-road, South Lambeth, S.W.*
1876	Hoyle, William, *Claremont, Bury, Lancaster.*
1875	Hozier, Lieut-Colonel Henry M., 30, *Chester-street, Grosvenor-place, S.W.*
1872	Hubbard, Egerton J., M.P., 4, *St. Helen's-place, Bishopsgate-street, E.C.*
1853	*Hubbard, The Right Hon. John Gellibrand, M.P., *Bank of England, E.C.*

Year of Election.	
1864	Hudson, Thomas, 21, *Gately-road, Brixton, S.W.*
1871	Hughes, Albert William, F.R.G.S., *Karachi, Sindh, India.*
1872	Humphreys, George, M.A., F.I.A., 79, *Pall Mall, S.W.*
1874	Humphreys, Noel Algernon, *Register-General's Office, Somerset House, W.C.*
1873	Hunt, Henry Arthur, C.B., 54, *Eccleston-square, S.W.*
1857	Hurst, George, *King's Brook House, St. Mary's, Bedford.*
1874	Hutton, Charles William Cookworthy, J.P., *Belair, Dulwich, S.E.*
1873	Hyndman, Henry Mayer, 10, *Devonshire-street, Portland-place, W.*
1866	Ince, Henry Bret, 18, *Old-square, Lincoln's-inn, W.C.*
1869	Ingall, Samuel, F.R.G.S., *Kent-end, Forest-hill, Kent, S.E.*
1874	*Ingall, William Thomas Fitzherbert Mackenzie, 50, *Threadneedle-street, E.C.*
1869	Inglis, Cornelius, M.D., 1, *Albert Mansions, Victoria-st., S.W., & Athenæum Club.*
1839	Irving, John, 94, *Eaton-place, S.W.*
1864	*Ivey, George Pearse, *Stanstead House, Walter-road, Swansea.*
1872	JANSON, FREDERICK HALSEY, F.L.S., 41, *Finsbury-circus, E.C., and Oak Bank, Chislehurst.*
1851	*Jellicoe, Charles, F.I.A., 12, *Cavendish-place, W.*
1862	JEULA, HENRY, F.R.G.S., 29, *Gracechurch-street, E.C.*
1864	*Jevons, Professor William Stanley, M.A., *The Chesnuts, Branch-hill, Hampstead Heath, N.W.*
1871	Johnson, Edmund, 3, *Northwick-terrace, Maida-hill, N.W.*
1872	Johnston, Francis J., *Lamas, Chislehurst.*

Year of Election.	
1874	Jones, Herbert, 15, *Montpelier-row, Blackheath, S.E.*
1873	Jones, Sir Willoughby, Bart., M.A., *Cranmer Hall, Fakenham, Norfolk.*
1858	Jourdan, Francis, *Avenue House, Hampstead, N.W.*
1873	Kay, Duncan James, 60, *Queen's-gate, S.W.*
1874	Kelly, Charles, M.D., *Worthing, Sussex.*
1867	Kelly, Edward Robert, A.M., 51, *Great Queen-street, Lincoln's-inn-fields, W.C.*
1873	Kemp, Samuel, *Oriel House, Bath.*
1864	Kennedy, Colonel John Pitt, 66, *St. George's-square, S.W.*
1868	Kennedy, Peter, 13, *Cornwall-terrace, Regent's-park, N.W.*
1870	Kennedy, William R., 27, *Rodney-street, Liverpool.*
1874	Kennelly, David Joseph, F.R.G.S., F.R.A.S., 3, *Clarence-terrace, Regent's-park, N.W.*
1852	Kimberley, The Right Honourable the Earl of, M.A., P.C., 35, *Lowndes-square, S.W.*
1872	Knight, John P., *London, Brighton, & S. Coast Rail., London Bridge, E.C.*
1865	Kühner, Henry, 39, *Lombard-street, E.C.*
1869	Kyshe, John B., *Colonial Office, Mauritius.*
1873	Lack, H. Reader, (*Secretary*), 4, *Quality-court, Chancery-lane, E.C.*
1863	Lambert, John, C.B., *Local Government Board, Whitehall, S.W.*
1869	Lamport, Charles, *Plasmawr, Penmaen Mawr, North Wales*

Year of Election.	
1873	Lancaster, D., F.I.A., *Indian Life Assurance Company, Meerut, India.*
1875	Lane, Thomas, *Percy Cottage, Eastbourne.*
1874	Lang, George Murray, R.N., 18, *Cheyne-walk, Chelsea, S.W.*
1843	*Larcom, General, Sir Thomas A., Bart., K.C.B., LL.D., F.R.S., *Heathfield, Fareham, Hants.*
1874	Lawes, John Bennett, F.R.S., F.C.S., *Rothamsted, St. Albans.*
1873	Lawrence, The Right Hon. Lord, G.C.B., G.C.S.I., 26, *Queen's-gate, S.W.*
1873	Lawrie, James, F.R.G.S., *Kelvin House, Quadrant-road, Highbury, N.*
1873	Lawson, Robert, 20, *Lansdowne-road, Notting-hill, W.*
1873	Lea, Thomas, 72, *Chester-square, S.W.*
1870	Leitch, John Muir, 18, *King William-street, E.C.*
1873	Leslie, Francis Seymour, *Ealing, W.*
1851	LEVI, PROFESSOR LEONE, LL.D., F.S.A., 5, *Crown Office-row, Temple, E.C.*
1867	Lewis, Charles Edward, M.P., 8, *Old Jewry, E.C.*
1873	Lewis, James, 1, *Stoneleigh Villas, Gresham-road, Brixton, S.W.*
1862	Lewis, Robert, 1, *Bartholomew-lane, E.C.*
1862	Leyland, John E., F.I.A.,
1868	Lissa, Joseph J. Cohen de, *Port Louis, Mauritius.*
1845	*Lister, William,
1834	Lloyd, John Horatio, 100, *Lancaster-gate, Hyde-park, W.*
1864	Logan, D., *Care of Messrs. Richardson*, 23, *Cornhill, E.C.*
1876	Lord, James, F.S.A., 1, *Whitehall-gardens, S.W.*
1876	*Lornie, John, *Rosemount, Kirkcaldy.*
1834	Lovelace, The Right Honourable the Earl of, F.R.S., *East Horsley Park, Ripley, Surrey.*
1875	Loyd, William Jones, J.P., 16, *Grosvenor-place, S.W., and Langleybury, Watford.*
1865	LUBBOCK, SIR JOHN, BART., M.P., F.R.S., (*Trustee*), *High Elms, Farnborough, Kent.*

Year of Election.	
1843	Lumley, William Golden, Q.C., LL.M., (*Vice-President*), *Local Government Board, Whitehall, S.W.*
1875	Mabson, Richard Rouse, *Holly Lodge, Cold Harbour-lane, Camberwell, S.E.*
1873	*Macandrew William, J.P., 29, *Pembridge-square, W.*
1873	McArthur, Alexander, M.P., *Raleigh Hall, Brixton, S.W.*
1873	McArthur, William, M.P., F.R.G.S., (Alderman), 1, *Gwydyr Houses, Brixton Rise, S.W.*
1867	M'Clean, Frank, 23, *Great George-street, Westminster, S.W.*
1864	M'Clelland, James, 32, *Pembridge-square, W.*
1873	McDermott, Edward, *Hill Side, Grove-park, Camberwell, S.E.*
1868	*Macdonald, James, 7, *Lothbury, E.C.*
1872	Macdonell, John, 1, *Pump-court, Temple, E.C.*
1873	*McEwen, Laurence T., 39, *Old Broad-street, E.C.*
1856	MacGillivray, Donald, F.I.A., 54, *Moorgate-street, E.C.*
1874	Mackay, Alexander Eugene, M.D., F.R.C.P., *Admiralty*, 9, *New-street, Spring-gardens, S.W.*
1871	Mackay, James Macgregor, 32, *Brunswick-square, Brighton.*
1876	McKenna, Sir Joseph N., M.P., 67, *Lancaster-gate, W.*
1866	McKenna, W. C., 18, *King-street, E.C.*
1876	*McLean, Robert Allan, F.R.G.S., 8, *Old Jewry, E.C.*
1871	Mackenzie, Alfred Westwood, (*c/o* Dr. Stephen Mackenzie), 26, *Finsbury-square, E.C.*
1871	Mackeson, Charles, *The Admiralty, New-street, Spring-gardens, S.W.*
1870	Maclagan, David, 22, *George-street, Edinburgh.*

Year of Election.	
1874	Macleod, The Right Hon. Sir John Macpherson, K.C.S.I., 1, *Stanhope-street, Hyde Park, W.*
1863	Maclure, J. W., *The Home, Whalley Range, Manchester.*
1875	Macpherson, Hugh Martin, F.R.C.S., (*Inspector-General*), 17, *Mount-street, Grosvenor-square, W.*
1871	Malgarini, Frederick Lewis, F.R.S.E., 7, *Whitehall-place, S.W.*
1872	Manning, His Eminence The Most Rev. H. E., Cardinal, *Archbishop's House, Westminster, S.W.*
1874	Markham, Clements R., C.B., F.R.S., F.R.G.S., 21, *Eccleston-square, S.W.*
1875	Marsh, Alfred, 85, *Gracechurch-street, E.C.*
1860	Marsh, Matthew Henry, *Bamridge, near Andover, Hants.*
1865	Martin, Frederick, 12, *Fortess-terrace, Junction-road, N.W.*
1873	Martin, Henry, *National Bank of India*, 80, *King William-street, E.C.*
1867	Martin, James, *St. Bride's-street, Ludgate-circus, E.C.*
1874	*Martin, John Biddulph, M.A., F.Z.S., 6B, *The Albany, Piccadilly, W.*
1872	***Martin, Richard Biddulph**, M.A. (*Treasurer*), 68, *Lombard-street, E.C.*
1876	Martin, Thomas Jaques, *Colonial Life Assurance Company, Melbourne, Victoria.*
1875	*Mathers, John Shackleton *Hanover House, Leeds, Yorkshire.*
1870	Maxse, Rear-Admiral Frederick A. 67, *Cromwell-road, South Kensington, S.W.*
1874	May, Frank, *Bank of England, Threadneedle-street, E.C.*
1874	Maynard, Henry Wheler, *St. Aubyns, Grosvenor-hill, Wimbledon, S.W.*
1873	Meen, Joseph Austin, 30, *Lombard-street, E.C.*
1853	*Meikle, James, F.I.A., 6, *St. Andrew's-square, Edinburgh.*
1873	Mellor, T. Randolph, C.E., *Earn Bank, Eastbourne.*
1861	Messent, John, F.I.A., 429, *West Strand, W.C.*
1875	Mildmay, Henry Bingham, J.P., *Shoreham; and* 8, *Bishopsgate-street Within, E.C.*
1873	Millar, William Henry, *Cleveland Lodge, New Park-road, Brixton-hill, S.W*
1864	Minett, John Thomas, 1, *Adelaide-place, E.C.*

Year of Election.
1874 *Mocatta, F. D., F.R.G.S.,
9, *Connaught-place, W.*
1842 Moffatt, George,
103, *Eaton-square, S.W.*
1874 Moore, Charles Rendall,
4, *Royal Exchange-buildings, E.C.*
1874 Moore, Sandford, M.B.,
South Camp, Aldershot.
1872 Morgan, Octavius Vaughan, J.P.,
13, *Boltons, West Brompton, S.W.*
1873 *Morley, Samuel, M.P.,
18, *Wood-street, E.C.;* 16, *Upper Brook-street, W.*
1874 *Morris, James, M.D., F.R.C.S.,
13, *Somers-place, Hyde-park-square, W.*
1874 Morris, John,
6, *Old Jewry, London, E.C.*
1873 Morton, James,
Balclutha, Greenock, N.B.
1847 *MOUAT, FREDERIC J., M.D., F.R.C.S., (*Foreign Secretary*),
12, *Durham-villas, Kensington, W.*
1850 Murchison, John Henry,
8, *Austin Friars, E.C.*

1865 Nasmith, David,
4, *Garden-court, Temple, E.C.*
1854 Neild, Alfred,
Mayfield, Manchester.
1869 Neison, Francis Gustavius Paulus,
93, *Adelaide-road, South Hampstead, N.W.*
1862 Newbatt, Benjamin, F.I.A., F.R.G.S.,
13, *St. James's-square, S.W.*
1847 *NEWMARCH, WILLIAM, F.R.S., F.I.A.,
(*Trustee and Honorary Vice-President*),
67, *Lombard-st., E.C.; Beech Holme, Nightingale-lane, Clapham-common, S.W.*
1869 NEWMARCH, WILLIAM T., A.A., Oxon,
67, *Lombard-street, E.C.*
1858 Nightingale, Miss Florence,
35, *South-street, Park-lane, W.*
1874 Nissen, Hillary Nicholas, J.P.,
43, *Mark-lane, E.C.*

Year of Election.
1871 *Noble, Benjamin,
North-Eastern Bank, Newcastle-on-Tyne.
1870 Noble, John, J.P.,
21, *Queen Anne's-gate, Westminster, S.W.*
1873 Noott, Major Francis Harry,
The Convict Prison, Dartmoor.
1874 Norfolk, Ernest Walter,
4, *St. Michael's-road, Stockwell, S.W.*
1834 Norman, George Warde, J.P.,
Bromley, Kent.
1869 Norwood, Charles Morgan, M.P.,
21, *Billiter-street, E.C.*

1862 Ogbourne, Charles Henry,
The Battery, Newquay, Cornwall.
1876 Orange, William, M.D.,
Broadmoor, Wokingham, Berks.
1874 Overall, William Henry, F.S.A.,
Librarian, Guildhall, E.C. (*Representing the Library Committee of the Corporation of the City of London.*)
1834 *OVERSTONE, THE RIGHT HONOURABLE LORD, F.R.G.S., (*Honorary Vice-President*),
2, *Carlton-gardens, S.W.*

1866 *Palgrave, Robert Harry Inglis,
11, *Britannia-terrace, Great Yarmouth, Norfolk.*
1869 PATTERSON, ROBERT HOGARTH,
22, *Wingate-road,, Hammersmith, W.*
1870 Pattison, William Pollard, F.I.A.,
52, *Brook-street, Grosvenor-square, W.*
1873 Pearce, Charles William,
Devon House, Aire-lane, S.W.
1875 Pearson, Arthur, F.I.A.,
3, *Princes-street, Bank, E.C.*
1876 Pearson, Edwin James,
Board of Trade, Whitehall, S.W.

Year of Election

1837 *Pearson, Professor John, Q.C.,
13, Beaufort-gardens, Brompton-road, S.W.

1876 *Peek, Sir Henry, Bart., M.P.,
Wimbledon House, S.W.

1871 Pennington, Frederick, M.P.,
17, Hyde Park-terrace, W.

1874 Pepys, The Hon. George,
7, Norfolk-square, Hyde-park, W.

1874 Phené, John S., F.R.G.S., F.S.A., &c.,
5, Carlton-terrace, Oakley-street, S.W.

1835 *Phillips, Sir George Richard, Bart.,
22, Hill-street, Berkeley-square, W.

1859 Phillips, Henry James,
4, Ludgate-hill, E.C.

1873 Phillips, John Searle R.,
2, Essex-road, Sale, Manchester.

1871 *Pickering, John, F.R.G.S., F.S.A.,
Springfield Mount, Leeds.

1873 Pickstone, William,
Maesmynan Hall, Holywell.

1838 *Pinckard, George Henry, J.P., F.I.A.,
12, Grove-road, St. John's-wood, N.W.

1867 Plener, Ernest von, (*c/o M. J. Sedlaczek, Austrian Embassy*),
18, Belgrave-square, S.W.

1861 Plowden, W. Chicele, (*c/o Messrs. Lyon and Co.*),
Apollo-street, Bombay.

1869 Pochin, Henry Davis,
Barn Elms, Barnes, S.W.

1874 Ponsonby, The Hon. Frederick George Brabazon, M.A.,
3, Mount-street, Grosvenor-square, W.

1860 Potter, Edmund, F.R.S.,
64, Queen's-gate, South Kensington, S.W.

1871 Power, Edward,
16, Southwell-gardens, Kensington, W.

1867 Pratt, Robert Lindsay,
80, Bondgate, Darlington.

1849 Presant, John,
13, St. James's-square, S.W.

1874 Price, John Charles,
5, Argyle-place, Regent-street, W.

1874 Prinsep, Charles Campbell,
Department of Statistics and Commerce, India Office, S.W.

1871 Puleston, John Henry, M.P.,
41, Lombard-street, E.C.

1837 *Purdy, Frederick,
Local Government Board, Whitehall, S.W.; and 35, Victoria-road, Kensington, W.

Year of Election.	
1874	Quain, Richard, M.D., F.R.S., F.R.C.P., 67, *Harley-street, W.*
1872	*Rabino, Joseph, (care of Baron J. Vitta), 8, *Rue Lafont, Lyons.*
1858	*Radstock, The Right Honourable Lord, *East Sheen, Mortlake, S.W.*
1864	*Raleigh, Samuel, 9, *St. Andrew-square, Edinburgh.*
1860	Ramsay, Alexander Gillespie, F.I.A., *Canada Life Assurance, Hamilton, Canada West.*
1874	Ramsden, Sir James, of Barrow, D.L., *Furness Abbey, Lancashire.*
1865	Ratcliff, Charles, *Athenæum Club, S.W.; and Wyddrington, Birmingham.*
1859	Rathbone, P. H., *Greenbank Cottage, Liverpool.*
1874	*RAVENSTEIN, ERNEST GEORGE, F.R.G.S., 10, *Lorn-road, Brixton, S.W.*
1870	Rawlinson, Robert, C.B., 11, *Boltons, West Brompton, S.W.*
1835	RAWSON, SIR RAWSON WILLIAM, C.B., K.C.M.G., (*Vice-President*), *Wombwell Hall, Gravesend.*
1875	Record, John, *Kenninghall-road, Clapton, E.*
1856	REDGRAVE, ALEXANDER, *Factory Inspectors' Office, Whitehall, S.W.*
1867	Reid, Herbert Lloyd, 3, *Eland-terrace, Lavender-hill, S.W.*
1862	Reynolds, Frederick, *Education Department, Downing-street, S.W.*
1876	Rice, Thomas Fitzroy, *Grand Port, Mauritius.*
1873	Ripon, The Most Hon. the Marquess of, K.G., F.R.S, &c., 1, *Carlton-gardens, S.W.*
1851	Robertson, Alexander, 112, *Bishopsgate-street Within, E.C.*
1868	Robinson, Sir William Rose, K.C.S.I., *Civil Service, Madras.*
1859	Rogers, Professor J. E. Thorold, M.A., 8, *Beaumont-street, Oxford.*
1873	*Rosebery, The Right Hon. the Earl of, 2, *Berkeley-square, W.*

Year of Election.	
1834	*Ross, David, of Bladensburg, *Rostrevor, Co. Down, Ireland.*
1865	Ruck, George T., 33, *Camden-road, N.W.*
1834	Russell, The Right Honourable Earl, K.G., G.C.M.G., (*Honorary Vice-President*), 37, *Chesham-place, S.W.*
1874	Rutherford, Charles, 29, *St. Swithin's-lane, E.C.*
1873	*Salisbury, The Most Hon. the Marquess of, P.C., F.R.S., 20, *Arlington-street, W.*
1875	*Salomons, Sir David Lionel, Bart., J.P., *Broom-hill, Tunbridge Wells.*
1876	Salt, Thomas, M.P., *Local Government Board, Whitehall, S.W.*
1868	Samuelson, Bernhard, M.P., 56, *Prince's-gate, Hyde-park, S.W.*
1874	Sandford, George Montague Warren, M.P., 33, *Hertford-street, Mayfair, W.*
1860	Sargant, William Lucus, *Edgbaston, Birmingham.*
1874	Saunders, Francis, 6, *Limes-grove, Lewisham, S.E.*
1852	Saunders, James Ebenezer, jun., F.G.S., 9, *Finsbury-circus, E.C.*
1869	Sayle, Philip, F.R.H.S., 89, *Cannon-street, E.C.*
1875	Scott, Edward Henry, J.P., 27, *Grosvenor-square, W.*
1865	Scudamore, Frank Ives, C.B., *Constantinople.*
1866	Senior, George, *Rose Hill, Dodworth, near Barnsley.*
1869	Seyd, Ernest, 1A, *Prince's-street, E.C.*
1873	Seyd, Richard, 1A, *Prince's-street, E.C.*

Year of Election.	
1871	Shadwell, John Lancelot, 21, *Nottingham-place, W.*
1841	SHAFTESBURY, THE RIGHT HON. THE EARL OF, K.G. (*Honorary Vice-President*), 24, *Grosvenor-square, W.*
1875	Shelford, William, C.E., 35A, *Great George-street, Westminster, S.W.*
1873	Sherborne, The Right Honourable Lord, *Sherborne-park, Northleach, Gloucestershire.*
1871	Sidgwick, Henry, *Trinity College, Cambridge.*
1850	Singer, Charles Douglas, 9, *The Terrace, Upper Clapton, E.*
1873	Skoines, Henry Frost, 7, *Argyle-street, King's Cross, W.C.*
1869	Smee, Alfred Hutcheson, M.R.C.S., 7, *Finsbury-circus, E.C.*
1874	Smith, Edward, *Gresham Life Office*, 37, *Old Jewry, E.C.*
1871	Smith, E. Cozens, 1, *Old Broad-street, E.C.*
1873	Smith, Col. John Thomas, R.E., F.R.S., F.I.A., *Foelallt House, Lee, S.E.; and* 33, *New Broad-st., E.C.*
1867	*Smith, William Henry, M.P., 2, *Hyde-park-street, W.*
1876	Smith, Sydney, 65, *Basinghall-street, E.C.*
1876	Smith, Thomas, M.D., *Portland House, Cheltenham.*
1848	*SOPWITH, THOMAS, M.A., F.R.S., (*Vice-President*), 103, *Victoria-street, S.W.*
1855	Sowray, John Russell, *Office of Woods*, 1, *Whitehall-place, S.W.*
1874	Spence, James Mudie, F.R.G.S., F.Z.S., *Eglington House, Whalley Range, Manchester.*
1873	Spence, John Berger, 31, *Lombard-street, E.C.*
1867	*Spencer, Robert James, *High-street, Portsmouth.*
1876	Spensley, Howard, *Tintern, Clapham-common, S.W.*
1874	Spicer, James, J.P., *Harts, Woodford, Essex.*
1856	*Sprague, Thomas Bond, M.A., F.I.A., 26, *St. Andrew-square, Edinburgh.*
1872	Spriggs, Joseph, *Dale Cottage, Foxton, near Market Harbro'.*
1856	*Stainton, Henry Tibbats, *Mountsfield, Lewisham, S.E.*

Year of Election.	
1875	Stanger, William Wright, J.P., *Belvedere-road, Upper Norwood, S.E.*
1870	Stark, William Emery, *Trinity Cottage, Birchfield-road, Birmingham.*
1874	Stone, Alderman David Henry, J.P., 7, *Bucklersbury, E.C.*
1855	*Stott, John, F.I.A., *St. Vincent-place, Glasgow.*
1865	Strachan, Thomas Young, F.I.A., 18, *Grainger-street West, Newcastle-on-Tyne,*
1872	Strachey, General Richard, R.E., F.R.S., *India Office, Westminster, S.W.*
1836	*Symonds, Arthur, 4, *South-square, Gray's-inn, W.C.*
1873	Tait, Lawson, F.R.C.S., 7, *Great Charles-street, Birmingham.*
1859	Tait, Patrick Macnaghten, 39, *Belsize Park, N.W.; and Oriental Club, W*
1856	Tartt, William Macdowal, *Sandford-place, Cheltenham.*
1854	TAYLER, WILLIAM, D.L., F.S.A., 28, *Park-street, Grosvenor-square, W.*
1873	Taylor, Peter Alfred, M.P., 22, *Ashley-place, Westminster, S.W.*
1838	*Taylor, General Pringle, K.H.,
1864	*Thompson, Henry Yates, *Thingwall Broad Green, Liverpool.*
1868	Thomson, James, 35, *Nicholas-lane, E.C.*
1871	Thomson, Thomas D., 79, *Cornhill, E.C.*
1876	Thornely, William, *West Brow, Hampstead, N.W.*
1871	Thurlow, The Right Hon. Lord, *Dunphail, N.B.; Traveller's Club, Pall Mall, S.W.*
1876	Tomkins, George, LL.D., 32, *New Bridge-street, E.C.*
1855	Tomline, Colonel George, 1, *Carlton House-terrace, S.W.*
1843	Tottie, John William, *Coniston Hall, Bell Bush, Leeds.*

Year of Election.	
1868	*Treatt, Frank Burford, 7, *Corbyn-street, Hornsey-road, N.*
1868	Tritton, Joseph Herbert, 54, *Lombard-street, E.C.*
1852	Tuke, Harrington, M.D., 37, *Albemarle-street, W.; and Manor House, Chiswick.*
1867	Turner, Thomas, J.P., F.R.A.S., F.R.G.S., *Ashley House, Kingsdown, Bristol.*
1841	Tyndall, William Henry, 92, *Cheapside, E.C.*

1873	Underdown, Robert George, *Manchester Sheffield and Lincolnshire Railway, London-road Station, Manchester.*
1834	Urquhart, David.

1842	Valpy, Richard, 5, *Rutland-gate, S.W.*
1868	Vanderbyl, Philip, 51, *Porchester-terrace, W.*
1873	Venables, Alfred, 30, *Royal Exchange, E.C.*
1874	Vian, William John, 64, *Cornhill, E.C.*
1876	Vigers, Robert, 4, *Frederick's-place, Old Jewry, E.C.*
1873	Vivian, Major Quintus, D.L , F.R.G.S., 17, *Chesham-street, S.W.*

Year of Election.	
1861	Waddell, James, 12, *Queen Victoria-street, E.C.*
1874	Waite, Henry, F.R.G.S., 3, *Victoria-street, Pimlico, S.W.*
1873	Wakeford, Henry, *Home Office, Whitehall, S.W.*
1857	*Walford, Cornelius, F.I.A., 86, *Belsize-park-gardens, N.W.*
1871	*Walker, R. Bailey, *Woodbank Cottage, Bramhall, Stockport.*
1854	Walker, Thomas, B.A., F.I.A., *Shrewsbury-lane, Plumstead, Kent, S.E.*
1868	Wallis, Charles, J., 5, *Alfred-road, Highgate Hill, N.*
1876	Walter, Arthur Fraser, 15, *Queen's Gate-terrace, S.W.*
1850	Walter, John, M.P., 27, *Gresham-place, S.W.*
1873	Waring, Charles, 10, *Victoria-chambers, Westminster, S.W.*
1862	Washbourne, Buchanan, M.D., *Gloucester.*
1865	Waterhouse, Edwin, B.A., 13, *Gresham-street, E.C.*
1874	Watson, James, F.R.G.S., 24, *Endsleigh-street, Tavistock-square, W.C.*
1873	Watson, J. Forbes, M.D., *India Museum, South Kensington, W.*
1865	Watson, William West, *Glasgow.*
1865	Webster, Alphonsus, 44, *Mecklenburg-square, W.C.*
1873	Webster, James Hume, *Keith-lodge, Upper Norwood, S.E.*
1869	Weguelin, Christopher, 55, *Lower Belgrave-street, S.W.*
1873	Weguelin, Thomas Matthias, M.P., 44, *Grosvenor-gardens, S.W.*
1873	*Welby, Reginald Earle, C.B., *The Treasury, Whitehall, S.W.*

Year of Election.	
1855	Weldon, James Walton, 1, *St. James's-square, S.W.*
1876	Westgarth, William, 28, *Cornhill, E.C.*
1873	Wellington, His Grace the Duke of, K.G., &c., &c., *Apsley House, Piccadilly, W.*
1873	Wells, W. Lewis, 66, *Old Broad-street, E.C.*
1855	Welton, Thomas Abercrombie, 6, *Offerton-road, Clapham, S.W.*
1875	Whall, John Fitzwilliam, M.A. 16, *Scot-lane, Doncaster.*
1836	*Whishaw, James, 32, *Harewood-square, N.W.*
1859	Whitbread, Samuel, M.P., 10, *Ennismore-gardens, Princes-gate, S.W.*
1876	Whitcher, John, Jr., F.I.A., 81, *King William-street, E.C.*
1868	White, James (care of White Bros. & Co.), 58, *Gresham-street, Old Broad-street, E.C.*
1863	White, Leedham, 44, *Onslow-gardens, S.W.*
1871	White, William, 70, *Lombard-street, E.C.*
1873	Whitehead, Jeffery, 39, *Throgmorton-street, E.C.*
1875	Wilkinson, Thomas Read, *Manchester and Salford Bank, Manchester.*
1860	Willans, John W., 2, *Headingly-terrace, Leeds.*
1864	Williams, Frederick Bessant, 2, *Ludgate Hill, E.C.*
1870	Williams, H. R., 3, *Lime-street, E.C., and Oak Lodge, Highgate, N.*
1876	Williams, John Wortley, 7, *Finsbury-place South, E.C.*
1868	Williams, Rowland L. V., 7, *King's Bench-walk, Temple, E.C.*
1875	Wilson, Edwards D. J., M.A., 20, *Wiltshire-road, Brixton, S.W.*
1874	*Wilson, Robert P., 5, *Cumberland-terrace, Regent's Park, N.W.*
1872	*Winch, William R., *North Mymms Park, Hatfield, Herts.*
1868	Wood, H. W. I. (*Calcutta*), *Care of Messrs. Richardson*, 23, *Cornhill, E.C.*
1873	Woods, Henry, *Warnford Park, Bishop's Waltham, Hants.*
1838	Woolhouse, Wesley Stoker Barker, F.R.A.S., *Alwyne Lodge, Alwyne-road, Canonbury, N.*

Year of Election.	
1874	Woolner, Thomas, R. A., 29, *Welbeck-street, Cavendish-square, W.*
1864	*Wyatt-Edgell, Alfred, 40, *Lower Grosvenor-street, Grosvenor-square, W.; and Stanford Hall, Rugby.*
1838	*Wyatt-Edgell, Rev. Edgell, 40, *Lower Grosvenor-street, Grosvenor-square, W.; and Stanford Hall, Rugby.*
1872	Yeatman, Morgan, *Shawfield, Bromley, Kent.*
1849	*Young, Charles Baring, 12, *Hyde-park Terrace, W.*

⁂ *The Executive Committee request that any inaccuracy in the foregoing list may be pointed out to the* Assistant Secretary *and that all changes of address may be notified to him, so that delay in forwarding communications and the publications of the Society may be avoided.*

HONORARY MEMBERS.

HIS ROYAL HIGHNESS THE PRINCE OF WALES, K.G.,
Honorary President.

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Budapest	M. CHARLES KELETI, *Chef du Bureau Royal Hongrois, de Statistique. Conseiller Ministériel.*
Vienna	S. E. M. le BARON de CZŒRNIG, *Conseiller intime actuel de S. M. Imp. et Roy1., Président de la Commission Centrale I. et R. de Statistique à Vienne.*
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Brussels	SIR HENRY PAGE TURNER BARRON, Bart., *Secretary of Legation, British Embassy.*
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,,	M. VICTOR MISSON, *President de la Cour des Comptes de Belgique, &c.*

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,,	M. MICHEL CHEVALIER, *Membre de l'Institut, Professeur au Collège de France, Ancien Député, et Sénateur.*
,,	M. JOSEPH GARNIER, *Membre de l'Institut, Professeur d'Économie Politique à l'École des Ponts et Chaussées, Rédacteur en chef du Journal des Économistes.*
,,	M. CLEMENT JUGLAR, *Vice-President de la Société de Statistique de Paris.*
,,	M. ALFRED LEGOYT, *Ancien Directeur de la Statistique Générale.*
,,	M. E. LEVASSEUR, *Membre de l'Institut, Professeur au Collége de France.*

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,,	M. LE PLAY, *Ancien Sénateur.*
,,	M. le PRÉSIDENT DE LA SOCIÉTÉ DE STATISTIQUE DE PARIS.

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Berlin	M. le DR. ERNEST ENGEL, *Director of the Royal Statistical Office of Prussia.*
,,	M. le DR. OTTO HÜBNER, *Director of the Central Statistical Archives.*
Frankfurt	THE PRESIDENT OF THE STATISTICAL SOCIETY OF FRANKFURT.
Hamburg	M. le DR. JULIUS.
Jena	PROFESSOR BRUNO HILDEBRAND.

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Dublin	THE PRESIDENT OF THE STATISTICAL AND SOCIAL ENQUIRY SOCIETY OF IRELAND.
Manchester	THE PRESIDENT OF THE MANCHESTER STATISTICAL SOCIETY.

Greece.

Athens	A. MANSOLAS, *Chef de Division, Directeur du Bureau de Statistique Hellénique.*

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Genoa	SIGNOR FABRIZIO FABIANI.
Naples	IL GIUDICE ARPINO.
Rome	SIGNOR LUIGI BODIO, *Directeur de la Statistique Générale d'Italie, et Sécrétaire de la Commission Centrale de Statistique.*
,,	PROFESSOR CESARE CONTINI, *Membre de la Société Statistique de Paris.*
,,	IL MARCHESE AVVOCÁTO ERMENEGILDO DE CINQUE QUINTILI, *Sécrétaire Général de la Commission des Hôpitaux Romains.*
Turin	PROFESSORE GIOVANNI FLECHIA, *Président de la Faculté de Philosophie et Professeur à l'Université de Turin.*
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Netherlands.

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Russia.

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,,	M. le DR. J. B. VERNADSKI, *Conseiller d'Etat actuel, Ex-professeur.*
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Madrid	SEÑOR DON JOSÉ MAGAZ Y JAIME.

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,,	M. A. N. KIAER. *Chef du Bureau de Statistique au Ministère de l'Intérieur, Membre de la Société Royale des Sciences.*
Stockholm	M. le DR. FREDERIK THEODOR BERG, *Chef du Bureau Central de Statistique de la Suède.*
,,	M. EDWARD SCHEUTZ, *Ingénieur Civil.*

Switzerland.

Geneva	M. MALLET.

AMERICA.

Dominion of Canada.

Ottawa	JOHN LANGTON, Esq., *Auditor General.*

United States.

New Haven, Conn.	FRANCIS A. WALKER, M.A., *Professor of Political Economy, Yale College.*
Norwich, Conn.	The Hon. DAVID A. WELLS, *President of the American Association for the Promotion of Social Science, Corresponding Member of the Institute of France.*
Dorchester, Mass.	DR. EDWARD JARVIS, A.M., *President of the American Statistical Association, Boston.*
Taunton, Mass.	JOHN E. SANDFORD, *Speaker of the House of Representatives. Insurance Commissioner.*
Albany, N.Y.	THE HON. WILLIAM BARNES, *Counsellor-at-Law (Ex-Superintendent of the Insurance Department).*

AUSTRALASIA.

New South Wales.

Sydney	E. G. WARD, Esq., *Registrar-General.*

New Zealand.

Wellington	JAMES HECTOR, Esq., M.D., F.R.S.

South Australia.

Adelaide	JOSIAH BOOTHBY, Esq., *Under Secretary to the Government of South Australia.*

Tasmania.

Hobart Town	E. SWARBRECK HALL, Esq., M.R.C.S.
,,	EDWIN CRADOCK NOWELL, Esq., *Government Statistician.*

Victoria.

Melbourne	WILLIAM HENRY ARCHER, Esq., F.I.A., *Registrar-General.*
,, ...	HENRY HAYLYN HAYTER, Esq., *Government Statist.*
,, ...	HIS HONOR SIR REDMOND BARRY, Kt., *Judge Supreme Court.*

Note.—Honorary Members are requested to be so good as to inform the Assistant Secretary of any *inaccuracies* or *deficiencies* in the foregoing names and descriptions given, and to communicate hereafter any changes therein.

INDEX TO RULES.

RULE
1. Objects of the Society.
2. To consist of Fellows and Honorary Members.
3. Fellows unlimited; Hon. Members not to exceed seventy.
4. Fellows—Candidates to be proposed by two or more Fellows.
5. Do. to be elected by Ballot.
6. Do. on Admission may attach F.S.S. to their Names.
7. Honorary Members, Proposed by Council; Elected by Ballot.
8. Fellows, to pay an Annual Subscription or a Composition.
9. Do. how disqualified. Written notice of withdrawal required.
10. Do. and Honorary Members, Expulsion of.
11. Property of Society, to be vested in Three Trustees.
12. President, Council, and Officers, Number and Particulars of.
13. 14. Do. do. do. Election and Qualification of.
15. Do. do. do. Extraordinary Vacancies of.
16. Committees may be appointed by Council.
17. Meetings, Ordinary and Anniversary, to be held.
18. Ordinary Meetings, Business of. Strangers may be introduced.
19. Anniversary Meetings, Business of.
20. Special General Meetings may be called.
21. Auditors, Appointment and Duties of.
22. President, Duties of. To have a Casting Vote.
23. Treasurer, Duties of, subject to the Council.
24. Secretaries, Duties of.
25. Vice-Presidents, Powers of.
26. Council, Duties of, in Publishing Papers and Expending Funds.
27. 28. Do. Powers of, to frame Regulations not inconsistent with these Rules.
29. Do. to publish a Journal of the Transactions of the Society.
30. Right of Property reserved in all Communications received.

RULES OF THE STATISTICAL SOCIETY.

Objects of the Society.

1. The Statistical Society was established to collect, arrange, digest, and publish facts illustrating the condition and prospects of society, in its material, social and moral relations. These facts are for the most part arranged in tabular forms, and in accordance with the principles of the numerical method.

The Society not only collects new materials, but condenses, arranges, and publishes those already existing, whether unpublished or published in diffuse and expensive forms, in the English or in any foreign language.

The Society likewise promotes the discussion of legislative and other public measures from the statistical point of view. These discussions form portions of the Transactions of the Society.

Constitution of the Society.

2. The Society consists of Fellows and Honorary Members, elected in the manner laid down in the following rules.

Number of Fellows and Honorary Members.

3. The number of Fellows shall be unlimited. Foreigners or British subjects of distinction residing abroad may be admitted as Honorary Members: of whom the number shall not be more than seventy at any one time.

Proposal of Fellows.

4. Every Candidate for admission as a Fellow of the Society, shall be proposed by two or more Fellows, who, shall certify from their personal knowledge of him or of his works, that he is a fit person to be admitted a Fellow of the Statistical Society. Every such certificate having been read and approved at a Meeting of the Council, shall be suspended in the meeting-room of the Society until the following Ordinary Meeting, at which the vote shall be taken upon it.

Election of Fellows.

5. In the election of Fellows, the votes shall be taken by ballot. No person shall be admitted unless at least sixteen Fellows vote, and unless he have in his favour three-fourths of the Fellows voting.

Admission of Fellows.

6. Every Fellow elect shall appear for his admission on or before the third Ordinary Meeting of the Society after his election, or within such time as shall be granted by the Council.

The manner of admission shall be thus:—

Immediately after the reading of the minutes, the Fellow elect, having first paid his subscription for the current year or his composition, shall sign the obligation contained in the Fellowship-book, to the effect following:—

" We, who have underwritten our " names, do hereby undertake, each for " himself, that we will endeavour to " further the good of the Statistical " Society for improving Statistical " Knowledge, and the ends for which " the same has been founded; that " we will be present at the Meet" ings of the Society as often as con" veniently we can, and that we will " keep and fulfil the Rules and Orders " of this Society: provided that when" soever any one of us shall make known, " by writing under his hand, to the " President for the time being, that he " desires to withdraw from the Society, " he shall be free thenceforward from " this obligation."

Whereon the President, taking him by the hand, shall say,—" *By the autho" rity and in the name of the Statis" tical Society I do admit you a " Fellow thereof.*"

Upon their admission Fellows shall have the right of attaching to their names the letters F.S.S.

Admission of Honorary Members.

7. There shall be Two Meetings in the year, on such days as shall be hereafter fixed by the Council, at which *Honorary Members* may be elected.

No Honorary Member can be recommended for election but by the Council. Any Member of the Council may propose a Foreigner or British subject of distinction residing abroad at any Meeting of the Council, delivering at the same time a written statement of the qualifications, offices held by, and published works of the person proposed; and ten days' notice at least shall be given to every Member of the Council, of the day on which the Council will vote by ballot on the question whether they will recommend the person proposed. No such recommendation to the Society shall be adopted unless at least three-fourths of the votes are in favour thereof.

Notice of the recommendation shall be given from the chair at the Meeting of the Society next preceding that at which the vote shall be taken thereon. No person shall be elected an Honorary Member unless sixteen Fellows vote and three-fourths of the Fellows voting be in his favour.

The Council shall have power to elect as Honorary Members, the President for the time being of the Statistical Societies of Dublin, Manchester, and Paris, and the President of any other Statistical Society at home or abroad.

Payments by Fellows.

8. Every Fellow of the Society shall pay a yearly subscription of *Two Guineas*, or may at any time compound for his future yearly payments by paying at once the sum of Twenty Guineas.*

Defaulters.—Withdrawal of Fellows.

9. All yearly payments are due in advance on the 1st of January, and if any Fellow of the Society have not paid his subscription before the 1st of July, he shall be applied to in writing by the Secretaries, and if the same be not paid before the 1st of January of the second year, a written application shall again be made by the Secretaries, and the Fellow in arrear shall cease to receive the Society's publications, and shall not be entitled to any of the privileges of the Society until such arrears are paid; and if the subscription be not discharged before the 1st of February of the second year, the name of the Fellow thus in arrear shall be exhibited as a defaulter on a card suspended in the meeting-rooms; and if, at the next Anniversary Meeting, the amount still remain unpaid, the defaulter shall be announced to be no longer a Fellow of the Society, the reason for the same being at the same time assigned. No Fellow of the Society can withdraw his name from the Society's books, unless all arrears be paid; and no resignation will be deemed valid unless a written notice thereof be communicated to the Secretaries. No Fellow shall be entitled to vote at any Meeting of the Society until he shall have paid his subscription for the current year.

Expulsion of Fellows.

10. If any Fellow of the Society, or any Honorary Member, shall so demean himself that it would be for the dishonour of the Society that he longer continue to be a Fellow or Member thereof, the Council shall take the matter into consideration; and if the majority of the Members of the Council present at some Meeting (of which and of the matter in hand such Fellow or Member, and every Member of the Council, shall have due notice) shall decide by ballot to recommend that such Fellow or Member be expelled from the Society, the President shall at the next Ordinary Meeting announce to the Society the recommendation of the Council, and at the following Meeting the question shall be decided by ballot, and if at least three-fourths of the number voting are in favour of the expulsion, the President shall forthwith cancel the name in the Fellowship-book, and shall say,—

"By the authority and in the name "of the Statistical Society, I do declare "that A. B. (naming him) is no longer "a Fellow (or Honorary Member) "thereof."

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* Cheques should be made payable to the Society and crossed "Drummond and Co."

And such Fellow or Honorary Member, shall thereupon cease to be of the Society.

Trustees.

11. The property of the Society shall be vested in *three Trustees,* chosen by the Fellows. The Trustees are eligible to any other offices in the Society.

President, Council, and Officers.

12. The Council shall, independent of the Honorary Vice-Presidents, consist of thirty-one Members, of whom one shall be the President, and four be nominated Vice-Presidents. The Council shall be elected as hereafter provided. Any five of the Council shall be a quorum. From the Council shall be chosen a *Treasurer, three Secretaries,* and a *Foreign Secretary,* who may be one of the Secretaries. Six Fellows, at least, who were not of the Council of the previous year, shall be annually elected.

Election of President and Officers.

13. The President shall be chosen yearly by the Fellows. The same person shall not be eligible more than two years in succession.

The former Presidents who are continuing Fellows of the Society shall be Honorary Vice-Presidents; four Vice-Presidents shall be yearly chosen from the Council by the President.

Any Honorary Vice-President may take part in the deliberations of the Council on expressing a wish to that effect: and when attending the Meetings of the Council, shall exercise all the rights and powers of a Member of the Council.

The Treasurer and Secretaries shall be chosen yearly by the Fellows from the Council.

Election of Council.

14. The Council shall, previously to the Anniversary Meeting, nominate, by ballot, the *Fellows whom they recommend* to be the next President and Council of the Society. They shall also recommend for election a Treasurer and three Secretaries. Notice shall be sent to every Fellow whose residence is known to be within the limits of the metropolitan post, at least a fortnight before the Anniversary Meeting, of the names of Fellows recommended by the Council.

Extraordinary Vacancies.

15. On any *extraordinary vacancy* of the Office of the President, or other Officer of the Society, or in the Council, the Secretaries shall summon the Council with as little delay as possible, and a majority of the Council, thereupon meeting in their usual place, shall, by ballot, and by a majority of those present, choose a new President, or other Officer of the Society, or Member of the Council, to be so until the next Anniversary Meeting.

Committees.

16. The Council shall have power to appoint *Committees of Fellows* and also an Executive Committee of their own body. The Committees shall report their proceedings to the Council. No report shall be communicated to the Society which is not approved by the Council.

Meetings Ordinary and Anniversary.

17. The *Ordinary Meetings* of the Society shall be monthly, or oftener, during the Session, which shall be from the 1st of November to the 1st of July, both inclusive, on such days and at such hours as the Council shall declare. The *Anniversary Meeting* shall be held on such day in June of each year as shall be appointed by the Council for the time being.

Business of Ordinary Meetings.

18. The business of the *Ordinary Meetings* shall be to admit Fellows, to read and hear reports, letters, and papers on subjects interesting to the Society. Nothing relating to the rules or management of the Society shall be discussed at the Ordinary Meetings, except that the *Auditors' Report* shall be received at the Ordinary Meeting in *February,* and that the Minutes of the Anniversary Meeting, and of every Special General Meeting, shall be confirmed at the next Ordinary Meeting after the day of such Anniversary or Special General Meeting. *Strangers* may be introduced to the Ordinary

Meetings, by any Fellow, with the leave of the President, Vice-President, or other Fellow presiding at the Meeting.

Business of Anniversary Meeting.

19. The business of the *Anniversary Meeting* shall be to elect the Officers of the Society, and to discuss questions on its rules and management. No Fellows or Honorary Members shall be proposed or admitted at the Anniversary Meeting. No Fellow shall moot any question on the rules or management of the Society at the Anniversary Meeting, unless after *three weeks' notice* thereof given to the Council, but amendments to any motion may be brought forward without notice, so that they relate to the same subject of motion. The Council shall give fourteen days' notice to every Fellow of all questions of which such notice shall have been given to them.

Special General Meetings.

20. The Council may, at any time, call a *Special General Meeting* of the Society when it appears to them necessary. Any ten Fellows may require a Special General Meeting to be called, by notice in writing signed by them, delivered to one of the Secretaries at an Ordinary Meeting, specifying the questions to be moved. The Council shall, within one week of such notice, appoint a day for such Special General Meeting, and shall give one week's notice of every Special General Meeting, and of the questions to be moved, to every Fellow within the limits of the metropolitan post, whose residence is known. No business shall be brought forward at any Special General Meeting other than that specified in the notice for the same.

Auditors.

21. At the *first Ordinary Meeting* of each year, the Fellows shall choose two *Auditors*, not of the Council, who, with one of the Council, chosen by the Council, shall audit the Treasurer's accounts, and report thereon to the Society, which report shall be presented at the Ordinary Meeting in February. The Auditors shall be empowered to examine into the particulars of all expenditure of the funds of the Society where they shall see occasion, and may report their opinion upon any part of it.

Duties of the President.

22. The *President* shall preside at all Meetings of the Society, Council, and Committees, which he shall attend, and in case of an equality of votes, shall have a second or casting vote. He shall sign all diplomas of admission of Honorary Members. He shall admit and expel Fellows and Honorary Members, according to the rules of the Society.

Duties of the Treasurer.

23. The *Treasurer* shall receive all moneys due to, and pay all moneys due from, the Society, and shall keep an account of his receipts and payments. No sum exceeding Ten Pounds shall be paid but by order of the Council, excepting always any lawful demand for rates or taxes. He shall invest the moneys of the Society in such manner as the Council shall from time to time direct.

Duties of the Secretaries.

24. The *Secretaries* shall, under the control of the Council, conduct the correspondence of the Society; they or one of them shall attend all Meetings of the Society and Council, and shall have the care of duly recording the Minutes of the Proceedings. They shall issue the requisite notices, and read such papers to the Society as the Council may direct.

Powers of the Vice-Presidents.

25. A *Vice-President*, whether Honorary or nominated, in the chair, shall act with the power of the President, in presiding and voting at any Meeting of the Society or Council, and in admitting Fellows; but no Vice-President shall be empowered to sign diplomas of admission of Honorary Members, or to expel Fellows. In the absence of the President and Vice-Presidents, any Fellow of the Society may be called upon, by the Fellows then present, to preside at an Ordinary Meeting. The Fellow so presiding may admit Fellows, but shall not be empowered to act otherwise as President, or Vice-President.

Powers of the Council.

26. The Council shall have control over the papers and funds of the Society, and may, as they shall see fit, direct the publication of papers and the expenditure of the funds, so, that they shall not at any time contract engagements on the part of the Society beyond the amount of the balance that would be at that time in the Treasurer's hands, if all pre-existing debts and liabilities had been satisfied.

27. The Council shall be empowered at any time to frame *Regulations* not inconsistent with these rules, which shall be, and remain in force until the next Anniversary Meeting at which they shall be either affirmed or annulled; but no Council shall have power to renew Regulations which have once been disapproved at an Anniversary Meeting.

28. No Dividend, Gift, Division, or Bonus in money shall be made by the Society, unto or between any of the Fellows or Members, except as hereinafter provided.

29. The Council shall publish a Journal of the Transactions of the Society, and such other Statistical Publications, as they may determine upon, and may from time to time pay such sums to Editors and their assistants, whether Fellows of the Society or not, as may be deemed advisable.

30. All communications to the Society are the property of the Society, unless the Council allow the right of property to be specially reserved by the Contributors.

REGULATIONS OF THE LIBRARY.

1. The Library is open daily from 10 a.m. till 5 p.m., except on Saturdays, when it closes at 2 p.m.; and it is entirely closed during the month of September.

2. Fellows of the Society are permitted to take out Books on making personal application, or by letter addressed to the Librarian.

3. Fellows are not to have more than two works at a time, nor keep any books longer than a month; but when a work is returned, it can be re-borrowed, provided it has not been bespoken in the interim.

4. Scientific Journals and Periodicals are not circulated until the volumes are completed and bound.

5. Cyclopædias and works of reference are not circulated.

6. Any Fellow damaging a book, either replaces the work, or pays a fine equivalent to its value.

7. Works taken from the shelves for reference, are *not* to be replaced, but must be laid on the Library table.

8. The Secretaries shall report to the Council any infringement of these regulations.

DONORS TO THE LIBRARY.

During the Year 1876.

The Governments of

Austria and Hungary
Bavaria.
Belgium.
Denmark.
France.
Germany.
Greece.

Italy.
The Netherlands.
Roumania.
Russia.
Saxony.
Sweden and Norway.
Switzerland.

The United States of America.
The State of New York.
„ Massachusetts.
„ Pennsylvania.
„ Rhode Island.
Uruguay.

During the Year 1876—Contd.

The Colonial Governments of

New South Wales.
New Zealand.
Queensland.
South Australia.
Tasmania.
Victoria.
Mauritius.

Public Departments.

The Admiralty.
,, Army Medical Department.
,, Bengal Government.
,, Board of Trade.
,, Convict Prisons, Directors of.
,, Dublin Metropolitan Police.
,, Factories, Inspectors of.
,, Fire Brigade, Metropolitan.
,, Friendly Societies, Registrar of.
,, India Office.
,, Local Goverment Board.
The Naval Medical Department.
,, Mining Record Office.
,, Police, London Metropolitan.
,, Post Office.
,, Registrar-General of England.
,, ,, ,, Ireland.
,, ,, ,, Scotland.
,, Tithe Commissioners.
,, War Office.
,, Warden of Standards.

Academy of Natural Sciences, Philadelphia, U. S. A.
Actuaries, The Institute of, London.
American Academy of Arts and Sciences, Boston, Mass.
American Geographical Society of New York.
American Philosophical Society of Philadelphia.
American Statistical Association, Boston, Mass.
Archer, W. H., Esq., Victoria.
Armstrong, Sir William, R.N.
Asiatic Society of Bengal.
,, ,, Japan.
Astor Library, New York, U. S. A.
Athenæum, The Editor of.
Austria, The Central Statistical Bureau of.
Austrian Consul-General, London.
Bankers' Magazine, The Editor of, London.
Bankers' Magazine, The Editor of, New York, U. S. A.
Barnes, Hon. William, U. S. A.
Baxter, Dr. J. H., Washington.
Belgium, the Minister of the Interior of.
Berne, Statistical Bureau of.
Berlin ,, ,,
Bodio, Professor Luigi, Rome.
Bojanowsky, Dr., London.
Boothby, J., Esq., South Australia.
Brabrook, E. W., Esq.
Bradlee, Rev. C. D., U. S. A.
British Association for the Advancement of Science.
Bruton, Leonard, Esq., Bristol.
Bruxelles, Academie Royale de.
Budapest, Chamber of Commerce.
,, Statistical Bureau.
Burt, Rev. J. F., M.A.

Cernuschi, M. Henri.
Charity Organization Society.
Chicago Public Library.
Civil Engineers, Institution of.
Cleveland Institution of Civil Engineers.
Cobden Club, the Committee of.
Cohen de Lissa, J. J., Mauritius.
Consul-General of Germany.

During the Year 1876—*Contd.*

Consul-General of Italy.
Contini, Professor C., Rome.
Craigie, Capt., Patrick George.
Danvers, Juland, Esq.
Davis, Rear Admiral, U. S. Navy.
Dawson, G. J. C., Esq.
Delmar, A., Esq., Philadelphia, U. S. A.
Denmark, the Bureau of Statistics of.
Doran, J. J., Esq., U. S. A.
Du Cane, Colonel E. F., C.B.

East India Association.
Edinburgh and Leith Engineers' Society.
Engel, Dr. Ernest, Berlin.

Ficker, Dr. Adolf, Vienna.
Florence, Giunta Comunale de Statistica.
France, H.E. the Minister of Justice of.
Franklin Institute, Philadelphia, U. S. A.
Freeland, H. W., Esq., M.A.

Glasgow, Philosophical Society of.
Glasgow, Sanitary Department.

Hamburg, Statistical Bureau of.
Hammick, J. T., Esq.
Hancock, W. N., Esq., LL.D.
Happé, Dr., Berlin.
Harcus, W., Esq., South Australia.
Harrison and Sons, Messrs.
Harvard College, Massachusetts, U. S. A.
Hayter, H. H., Melbourne.
Hector, Dr., F.R.S., New Zealand.
Historical Society of Lancashire and Cheshire.
Howard Association.
Hoyle, William, Esq.
Hunt, Robert, Esq.
Hunter, W. W., B.A., LL.D.

Insurance Record, The Editor of.
Italian Legation, London.
Italy, The Ministers of Finance, of Public Works, and of Agriculture, Industry, and Commerce.

Jarvis, Dr. E., Dorchester, Mass.
Jones, J. P., Esq., Nevada, U. S. A.
Journal de Statistique Suisse, The Editor of.

Keleti, Chas., Esq., Budapest.
King's College, London.
Korosi, Joseph, Budapest.
Kyshe, J. B., Esq., Mauritius.

La Réforme Economique, The Editor of, Rouen.
Labourers' Friend, The Editor of.
Lavasseur, Mons. E., Paris.
Leipsic, Statistical Bureau of.
Levi, Professor Leone, LL.D.
Liverpool Literary and Philosophical Society.
Lloyds, the Committee of.
London Hospital, Secretary of.
Lumley, W. G., Esq., Q.C.
Lyons, Medical Scientific Society of.

Manchester, City Treasurer.
Manchester, Literary and Philosophical Society.
Manchester Statistical Society.
Mansolas, Mons. A., Athens.
Michie, Archibald, Esq., Q.C.
Mining Registrar, Victoria.

National Association for the Promotion of Social Science.
Nature, The Editor of.
New South Wales, Agent-General for.
" " Registrar-General.
New York State Canal Commissioners.
New York State Library, U. S. A.
New Zealand, The Registrar-General of.
Nowell, E. C., Esq., Tasmania.
Nuova Autalogia di Scienzi, The Editor of, Florence.

During the Year 1876—*Contd.*

Nystrom, J. W.
Observatoire Bruxelles.
Ourt, Dr. A. J., U.S.A.
Peek, Sir Henry, M.P.
Philadelphia Social Science Association.
Pickering, John, Esq.
Plowden, W. C., Esq.
Poor, H. V., Esq., New York.
Portuguese Legation.
Prague, Statistical Bureau of.
Purdy, F., Esq.
Queckett Microscopical Club.
Queensland, The Registrar-General of.
Ravenstein, E. G., Esq.
Redgrave, Alexander, Esq.
Revue Bibliographique Universelle, The Editor of.
Romania, The Minister of the Interior of.
Rome, Giunta Centrale de Statistica.
Royal Agricultural Society.
,, Asiatic Society.
,, ,, ,, Bombay Branch.
,, College of Surgeons.
,, Dublin Society.
,, Geographical Society.
,, Institution.
,, Irish Academy.
,, Med. and Chirurgical Society.
,, Society of Edinburgh.
,, Society of Tasmania.
,, Society of Victoria.
,, United Service Institution.
Russell, Dr. J. B., Glasgow.
Saxony, The Statistical Bureau of.
St. Bartholomew's Hospital.
Scelsi, Signor Geacinto, Ferrara.
Scherzer, Dr. Karl von, London.
Schleisner, Dr. P. A., Copenhagen.
Scott, Henry, Esq., Queensland.
Semenow, H. E., Mons. P. de.
Seyd, Ernest, Esq.
Seyd, Richard, Esq.
Shaw, Capt. E. M.
Sheffield, Medical Officer of Health.
Smith, Edward, Esq.
Smith, Col. J. T., F.R.S.
Smithsonian Institution, Washington, U. S. A.
Snow, Dr. E. M., Providence, U.S.A.
Society of Arts.
South Australian Institute.
South Australia, Chief Secretary of.
,, ,, Agent General of.
Stark, W. Emery, Esq.
Statistical Society of Paris.
Statistical and Social Inquiry Society of Ireland.
Surtees Society.
Surveyors, The Institution of.
Tallack, William, Esq.
Tartt, W. M., Esq.
Tasmania, The Registrar-General of.
Tayler, W., Esq.
Taylor and Francis, Messrs.
The Western, The Editor of, St. Louis, Mo., U. S. A.
Thomas, Dr. Llewelyn.
Trübner, Messrs., London.
University College, London.
Vaillant, M., Montevideo.
Valpy, Richard, Esq.
Varrentrup, Dr. Geo., Frankfurt.
Vessélovsky, Mons. A.
Victoria, Agent-General of.
,, Registrar-General of.
Vienna, Central Statistical Commission of.
Walrus, M. Leon, Lausanne.
Wandsworth Board of Works.
Wells, The Hon. David A., Norwich, Connecticut, U. S. A.
Wilkie, The Hon. Dr. D. E., Melbourne.
Wilkinson, Thos. R., Esq.
Woodworth, Dr. J. M., Washington, U. S. A.
Young, Edwd. Ph. D., Washington. U. S. A.
Yvernès, Mons. Emile, Paris.

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